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S. MARINE CORPS SCORE BOOK

A RIFLEMAN'S INSTRUCTOR

For the U. S. Magazine Rifle, Caliber .30, Model 1903

(The New Springfield)

With Model 1906 Ammunition

SECOND EDITION (REVISED)

ISSUED TO.....

For Use With Rifle No.....

UC-NRLF
$B 251 328

GIFT

The Marine Corps Cup

This Cup was presented to the National Rifle Association of America, by the officers of the Marine Corps and is competed for annually in an individual match, called the Marine Corps Match, during the matches of the National Rifle Association.

Conditions—Open to everybody.

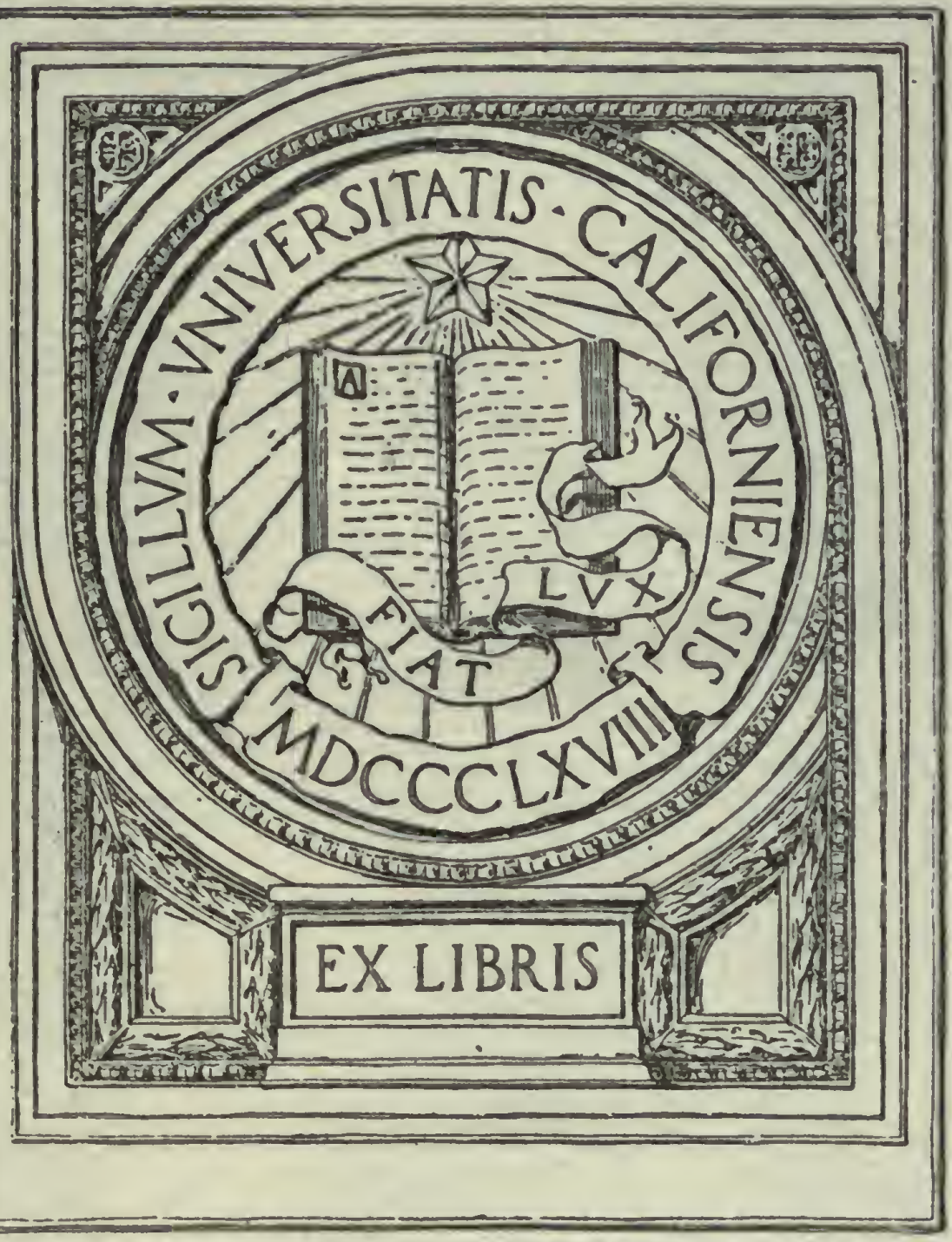
Rifle and Sights—Any Military.

Ammunition—Any.

Two sighting shots and twenty shots for record at each 600 and 1000 yards.

Designed and made by Samuel Kirk & Sons Co.

IN MEMORIAM
George Davidson
1825-1911



MARINE CORPS SCORE BOOK

A Rifleman's Instructor

BY

CAPTAIN WILLIAM C. HARLLEE

U. S. Marine Corps

Assisted by First Lieutenants W. D. SMITH and C. F. B. PRICE, U. S. M. C.

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INTRODUCTION.

The suggestions in this score book are principally for the information of beginners. They are the result of experience in the instruction of men on the range where it has been learned that the beginner must not be confused with too varied and comprehensive instruction.

Most things about shooting are simple when once learned, but there are so many essential details that the average beginner cannot keep them in his attention unless in his preparation for the range he has the essentials well fixed in his mind by previous study or instruction.

These details should be learned and should form part of the course of instruction preceding the coming to the range.

The kindly reception given the first edition by riflemen generally is much appreciated and has justified a second edition. Changes suggested by the use of the first edition and to bring it up to date have been made.

In memoriam
George Davidson
1825 – 1911.

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PART I.

PARTS OF THE RIFLE.

Every rifleman must know the names of the parts of his rifle. Take your rifle and locate these parts; get an experienced man to show them to you.

Only the parts usually mentioned on the range are included.

Barrel—muzzle, breech, chamber, bore, lands, grooves.

Receiver—magazine opening, clip slots, bolt stop.

Bolt—handle, sleeve, sleeve lock, firing pin, comb (or knob) of firing pin, firing pin sleeve, striker, main spring, extractor.

Ejector—Safety Lock—Trigger Guard—Floor Plate—Floor Plate Catch—Magazine Spring Follower—Cut Off—Sear—Sear Spring—Trigger.

Front Sight—front sight stud, front sight movable stud.

Rear Sight—base, movable base, windage screw, sight leaf, slide, binding screw, drift slide, peep, open sight notches, battle sight notch.

Stock—butt, toe of butt, heel of butt, small of stock, comb of stock, balance, grooves, hand guard.

Butt Plate—Butt Plate Cap—Butt Swivel.

Upper Band—bayonet lug.

Stacking Swivel—Lower Band—Lower Band Swivel—Lower Band Spring.

Bayonet—pommel, guard, scabbard catch, bayonet catch, grip.

M286638

THE CARE AND CLEANING OF THE RIFLE.

Unless a rifle is cleaned and cared for properly it promptly becomes useless so far as accurate shooting is concerned.

Rifles must never be cleaned from the muzzle. Wearing or injuring the muzzle destroys accuracy. Remove the bolt and clean from the breech.

A cleaning rack should be provided at all ranges and at all barracks, and placed either in the squad rooms, or in halls or porches of barracks, or at other convenient and accessible places so that the best way to clean will be the easiest way, and so that men will form the correct habit. If there are no cleaning racks provided, place a piece of board or paper on the floor, and rest the muzzle on it when you clean.

After shooting there are three kinds of fouling.

1st. A black fouling easily removed by a cleaning rag.

2nd. A sticky fouling which you cannot see and which oil will not remove. It is acid in its nature, and must be removed by alkaline materials such as ammonia on a rag or a solution of crude soda, or soapy water pumped back and forth through the bore. When these are used they must be removed from the bore immediately, otherwise they will cause rust. They can be removed by pumping clear water through the bore. The bore is then dried and oiled. A mixture of equal parts by measure of

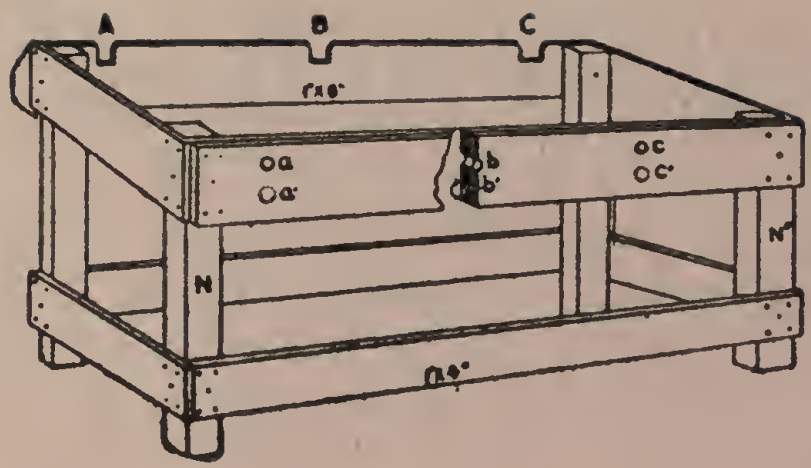
amyl-acetate, sperm oil, acetone and turpentine is usually provided at ranges, and this serves not only to remove the fouling but also as a rust preventive, and as an oil, and is the safest and best thing to use as it never does the rifle any injury.

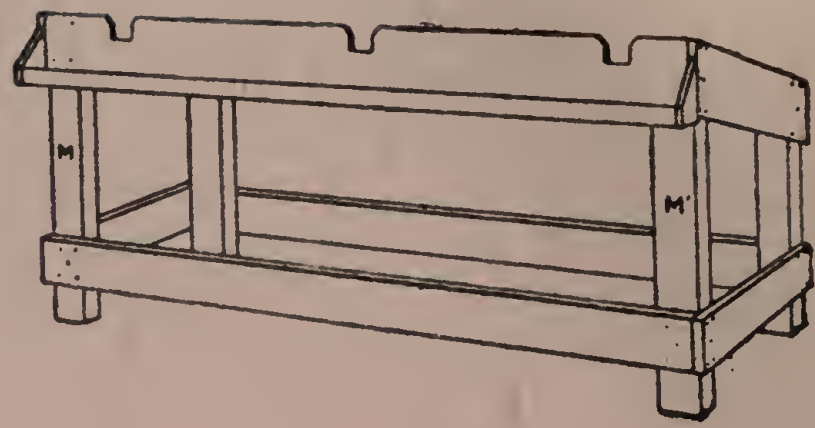
After being fired a rifle must be cleaned daily for several days, because the bore sweats, and the daily cleanings should be continued until rags run through the bore come out clean. Otherwise a bore is sure to rust, no matter how much oil is put in it. Then it requires only to be occasionally cleaned and oiled. If it is to be laid away it should be oiled with heavy oil such as cosmoline (vaseline), or gas engine cylinder oil.

3rd. Metal fouling. The ammunition now issued gives very little trouble from metal fouling. In fact, very few rifles are troubled with it at all, and it is so rare that a man's instruction will not be deficient if no mention is made of it.

The "ammonia dope" used to remove it should be handled only by experienced men. The improper use of it will spoil a rifle. Should an occasional rifle require treatment for metal fouling, the formula for the "dope" and instructions for its use can be found in the latter part of this book.

The cloth of ammunition bandoleers makes excellent cleaning rags.





Distance from A to B about 24″
Length of N and N′= " 30″
Length of M and M′=about 36″

RACK FOR CLEANING RIFLES.

The rifle rests in *Aa*, *Bb*, or *Aa′*, *Bb′*, etc., the muzzle being inserted in hole *a*, or hole *a′*, etc. Holes *a*, *b*, etc., are drilled through; holes *a′*, *b′*, etc., are drilled half-way through as illustrated. The square cuts *A*, *B*, etc., are of sufficient width to receive snugly small of gun stock. Distance *A* to *a* is such that trigger guard will bear snugly against inside face of *A*. Front legs (*M* and *M′*) are of such length as to facilitate cleaning the rifle when in the rack. Rear legs (*N* and *N′*) are slightly shorter than (*M* and *M′*) giving rifle a slope. Distance from *A* to *B*; *B* to *C*, etc., is such as to facilitate cleaning, number of spaces *A*, *B*, *C*, etc., depends on circumstances. If for use in squad rooms, two or three spaces will suffice, and the rack should be neatly constructed. For outdoor or range use the number of spaces *A*, *B*, etc., would be greater, and the rack may be made of rough material. This sketch is designed to illustrate the mode of construction, hence may be modified.

A rack built for use on both sides is preferable to the one illustrated here.

RECORD OF FIRING FOR YEAR 191..... AT.....

ARMY MARKSMANS		
COURSE	INSTRUCTION	RECORD
200 YDS SLOW		
300 " "		
500 " "		
600 " "		
200 YDS RAPID		
300 " "		
1st SKIRMISH		
2nd SKIRMISH		
TOTAL		
DATE		

SHARPSHOOTERS		
COURSE	INSTRUCTION	RECORD
800 YDS SLOW		
1000 YDS "		
500 YDS RAPID		
TOTAL		
TOTAL MKS COURSE		
AGGREGATE		
DATE		

NECESSARY FOR QUALIFICATION
MARKSMAN 300
SHARPSHOOTERS 90
ALSO AGGREGATE OF 415
EXPERT 25 HITS

EXPERT RIFLEMANS		
TEST	PRACTICE	RECORD
200 MOVING		
300 MOVING		
400 BOBBING		
500 BOBBING		
500 FALLING		
600		
TOTAL HITS		
DATE		

MARKSMAN $2
SHARPSHOOTER $3
EXPERT $5
PER MONTH ADDITIONAL PAY

FILL THIS OUT WHEN YOUR QUALIFICATION IS ANNOUNCED IN ORDERS
QUALIFIED AS.....191 S.O. NO.....HDQRS U.S.M.C.....191

RECORD OF FIRING FOR YEAR 191.....AT.....

ARMY MARKSMANS		
COURSE	INSTRUCTION	RECORD
200 YDS SLOW		
300 " "		
500 " "		
600 " "		
200 YDS RAPID		
300 " "		
1st SKIRMISH		
2nd SKIRMISH		
TOTAL		
DATE		

SHARPSHOOTERS		
COURSE	INSTRUCTION	RECORD
800 YDS SLOW		
1000 YDS "		
500 YDS RAPID		
TOTAL		
TOTAL MKS COURSE		
AGGREGATE		
DATE		

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400 BOBBING		
500 BOBBING		
500 FALLING		
600_		
TOTAL HITS		
DATE		

MARKSMAN $2
SHARPSHOOTER $3
EXPERT $5
PER MONTH ADDITIONAL PAY

FILL THIS OUT WHEN YOUR QUALIFICATION IS ANNOUNCED IN ORDERS
QUALIFIED AS_____191 S.O. NO.....HDQRS U.S.M.C.....191

RECORD COMPETITIVE FIRING IN NAVY MARKSMANS COURSE							
200 SLOW RIFLE STANDING							
300 SLOW RIFLE SITTING OR KNEELING							
500 SLOW RIFLE							
TOTAL RIFLE							
RIFLE MULTIPLIED BY THREE							
25 YDS PISTOL							
50 " " PISTOL							
AGGREGATE RIFLE & PISTOL							
QUALIFICATION							
EVENT STATE WHETHER INDIVIDUAL POST OR INTER POST COMPETITION							
PRIZE							
DATE							

REMARKS

THERE ARE THREE KINDS OF COMPETITIONS FOR WHICH PRIZE MONEY IS AWARDED ON PAY ROLL THEY ARE

INDIVIDUAL
POST
INTERPOST

IN ALL THESE COMPETITIONS THE NAVY MARKSMANS COURSE IS FIRED TARGET A IS USED FOR ENTIRE COURSE

THE NECESSARY AGGREGATES FOR NAVY QUALIFICATIONS ARE AS FOLLOWS

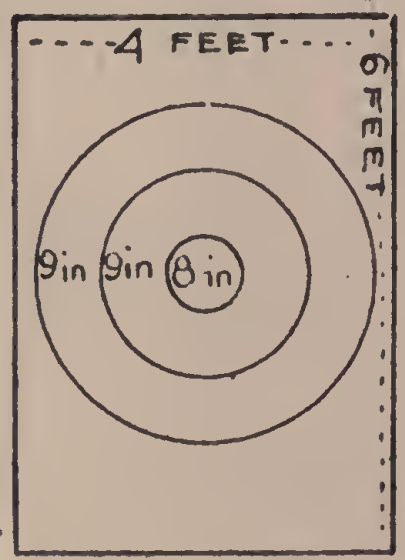
MARKSMAN	408 = 80%
1st CLASS	357
2nd. CLASS	306
3rd. CLASS	255
4th. CLASS	204

TARGETS USED IN ARMY MARKSMANS COURSE

EVERY MAN SHOULD KNOW THE NAME AND SIZE OF TARGETS

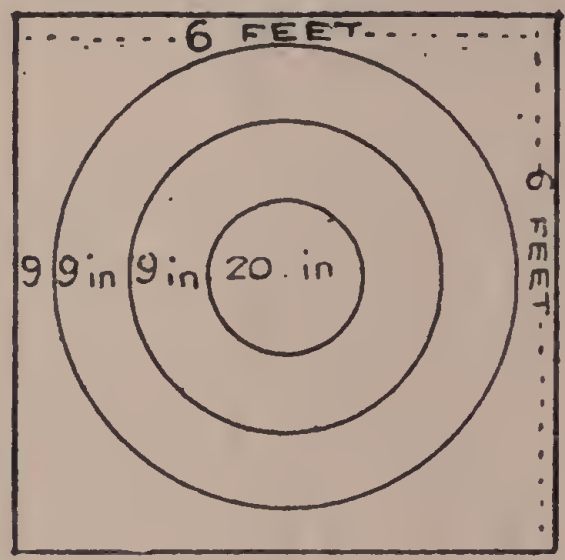
TARGET A

USED FOR SLOW FIRE AT SHORT RANGES 200 STANDING 300 SITTING OR KNEELING



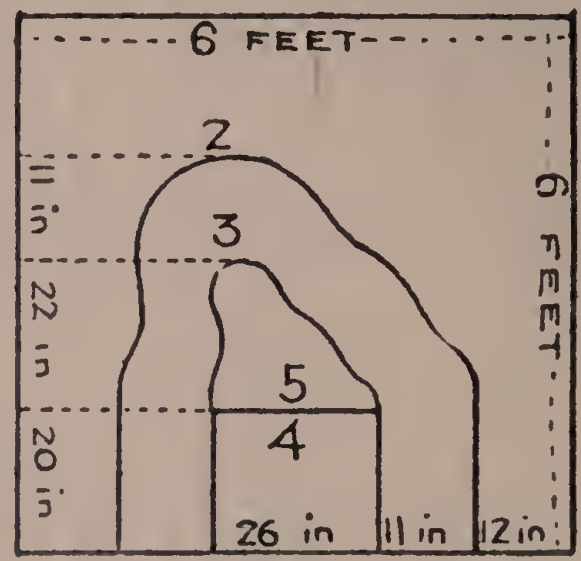
TARGET B

USED FOR SLOW FIRE AT MID RANGES (500 & 600) POSITION PRONE



TARGET D

USED FOR RAPID FIRE 200 & 300 ALSO FOR SKIRMISH



NOTICE THAT ALL TARGETS ARE SIX FEET HIGH

NOTICE THAT THE RINGS ARE 9 INCHES APART THIS IS NOT EXACT BUT IT IS EASY TO REMEMBER

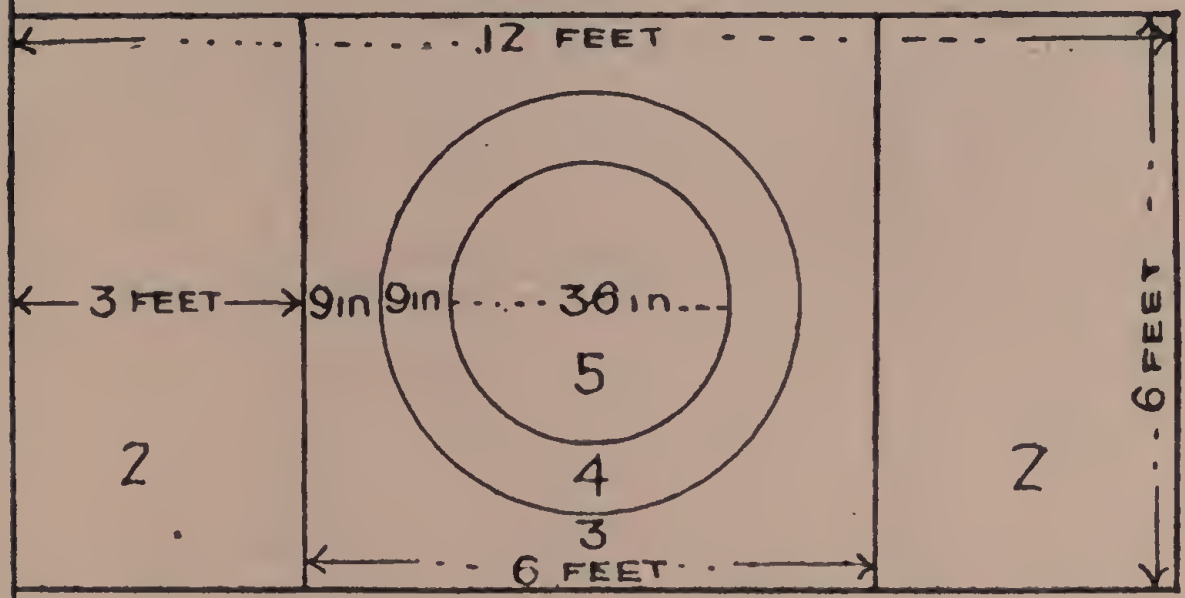
IN RAPID FIRE ALL HITS ON TARGET COUNT

IN SKIRMISH ONLY FIVES AND FOURS COUNT

FOR NAVY MARKSMANS COURSE TARGET A IS USED FOR ALL FIRING BOTH PISTOL AND RIFLE

TARGET: USED IN SHARPSHOOTERS COURSE
FOR SLOW FIRE AT LONG RANGE 800 & 1000 — PRONE

.TARGET C.



TARGET D IS USED
FOR RAPID FIRE
PRONE AT 500 YARDS
SHARPSHOOTERS COURSE
TIME LIMIT FOR EACH
STRING OF 5 SHOTS
30 SECONDS

NOTICE THE 9 INCH SPACES ABOVE

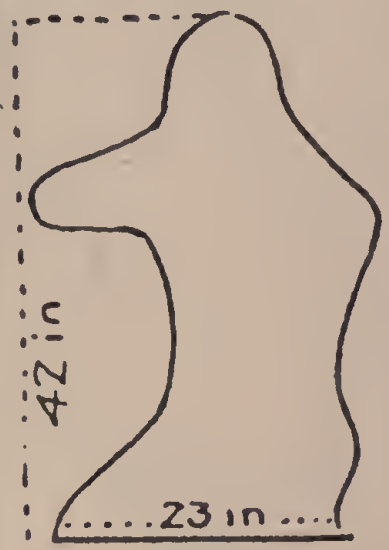
TARGET: USED IN COLLECTIVE FIRE
EACH SQUAD HAS A TARGET
CONSISTING OF 3 "C" TARGETS ARRANGED THUS

THE BULLS EYES OF THE OUTSIDE TARGETS
SHOULD BE COVERED WITH TARGET PAPER

TARGETS USED IN EXPERT RIFLEMANS TEST

TARGETS ARE ALL COVERED WITH KHAKI COLORED PAPER

FIGURE E

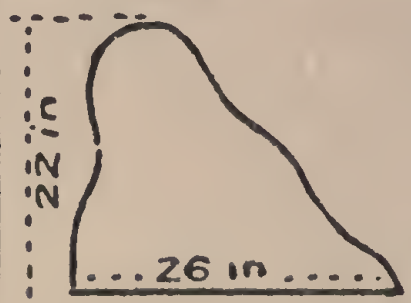


600 YDS THE TARGET IS STATIONERY. IT STAYS UP UNTIL TEN SHOTS SLOW FIRE HAVE BEEN FIRED-IT CAN BE OPERATED FROM BEHIND THE REGULAR BUTTS AND ON THE REGULAR TARGET CARRIERS - OR IT MAY BE HELD UP ON A STAFF

500 & 400 BOBBING TARGETS H FIGURE E-5 TARGETS ARE USED. THEY MAY BE RUN UP AND DOWN ON F REGULAR TARGET CARRIER OR ON A STAFF. EACH TARGET STAYS UP 5 SECONDS, AND THERE IS AN INTERVAL OF 5 SECONDS BETWEEN THE DISAPPEARANCE OF THE TARGET AND THE APPEARANCE OF THE NEXT TARGET

200 AND 300 YDS MOVING TARGET M FIGURE E IS FIXED ON A CAR WHICH MOVES ON A TRACK 50 YARDS LONG THE TARGET MOVES THE 50 YARDS IN 30 SECONDS *

FIGURE F



500 YDS FALLING TARGET G FIGURE F CONSISTS OF 5 TARGETS—ALL TARGETS ARE UP AND REMAIN UP UNTIL HIT. THEY ARE SUPPOSED TO FALL WHEN HIT BUT SELDOM DO SO. THEY CAN BE RUN UP ABOVE THE BUTTS ON CARRIER OR A STAFF. AND WHEN HIT PULLED BY MARKER

*The moving target may be carried on a staff by a man walking behind the butts.

EXPERT RIFLE MANS TEST

PEEPSIGHT MAY BE USED AT 600 YARDS
AT ALL OTHER RANGES THE BATTLE SIGHT MUST BE USED
AT 200 AND 300 THE WIND GAUGE MUST BE SET AT ZERO

POSITION AT 200 YDS IS KNEELING AT ALL OTHER RANGES PRONE

600 YDS	10 SHOTS	AT FIGURE E STATIONERY	SLOW FIRE
500 "	5	AT BOBBING TARGETS. TARGETS SHOULD NOT APPEAR IN REGULAR SEQUENCE	
400 "	5 "	AT BOBBING TARGETS	
300 "	10 "	2 STRINGS OF 5 SHOTS EACH. TARGET MOVES 50 YDS IN 30 SEC. FOR EACH STRING	
200 "	10 "	SAME AS 300	
500 "	10 "	2 STRINGS OF 5 SHOTS EACH AT GROUPS OF 5 FALLING TARGETS G TIME LIMIT FOR EACH STRING 30 SEC. TAKEN AT FIRING LINE	

TOTAL 50 SHOTS

25 HITS ARE NECESSARY TO QUALIFY AS EXPERT

OCLOCK OF HITS

IMAGINE A CLOCK FACE ON THE TARGET
HITS ARE THEN SPOKEN OF ACCORDING TO THE OCLOCK OF HITS

THE CIRCLES REPRESENT THE APPEARANCE OF SPOTTERS

WHEN THE SHOT HOLE TOUCHES A LINE THE HIGHEST VALUE IS GIVEN

IN MARKING
A WHITE DISK INDICATES A 5
A RED DISK INDICATES A 4
A BLACK CROSS ON WHITE DISK A 3
A BLACK DISK INDICATES A 2

THE FOLOWING EXPLAINS HOW HITS ON THE TARGET ARE USUALLY DESIGNATED

(S1) IS A 4 AT 3 OCLOCK HALF WAY OUT

(S2) IS A 5 AT 5 OCLOCK WELL OUT

(1) IS A 4 AT 6 OCLOCK IS HANGING ON THE BULL

(2) IS A 4 AT 12 OCLOCK IS SITTING ON THE BULL

(3) IS A 5 — PIN WHEEL

(4) IS A 4 AT 10 OCLOCK CLOSE IN

(5) IS A 4 AT 9 OCLOCK WELL OUT

(6) IS A 4 AT 8 OCLOCK IT IS A WART (1) AND (2) ARE ALSO WARTS

(7) IS A 3 AT 12 OCLOCK

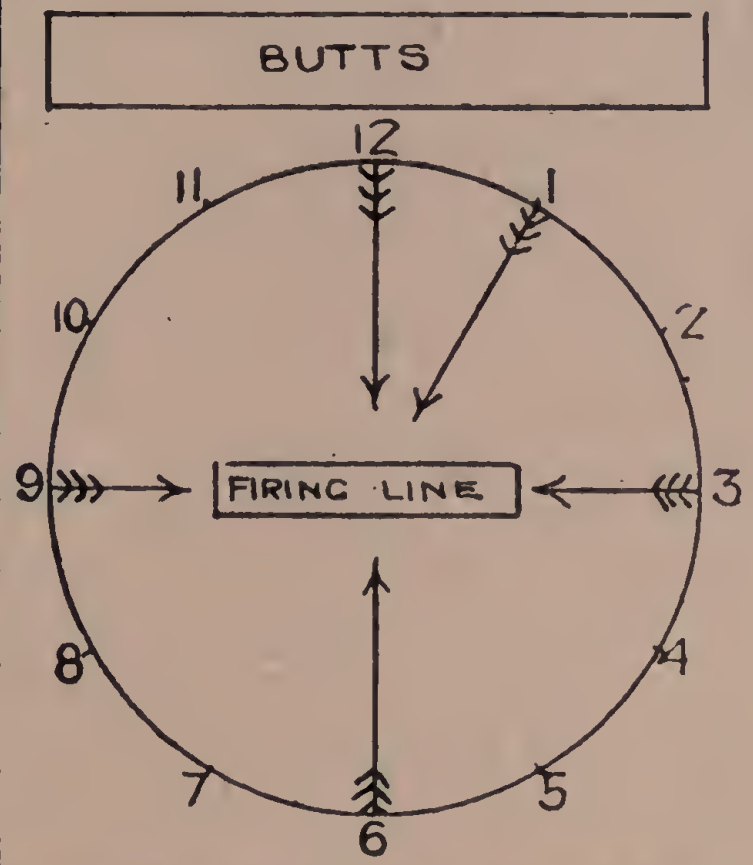
(8) IS A 2 AT 1 OCLOCK

(9) IS A 5 AT 2 OCLOCK IT IS A NIPPER

(10) IS A 5 CLOSE IN AT 7 OCLOCK

OCLOCK OF WINDS

THE DIRECTION OF WIND IS EXPRESSED BY USE OF THE WORD OCLOCK IMAGINE YOURSELF ON THE FIRING LINE AND IN THE CENTER OF A BIG-CLOCK WITH THE 12 TOWARDS THE TARGETS. THE DIAGRAM SHOWS THE OCLOCK OF VARIOUS WINDS



FORCE OF WIND IS EXPRESSED IN MILES PER HOUR FOR INSTANCE A 5 MILE WIND MEANS A WIND BLOWING 5 MILES PER HOUR

THE ABILITY TO ESTIMATE FORCE OF WIND IS EASILY ACQUIRED BY PRACTICE IT IS USUALLY ESTIMATED BY THE FEEL OF THE WIND IN THE FACE AND BY THE APPEARANCE OF THE FLAGS. PRACTICE IT WITH THE ASSISTANCE OF AN EXPERIENCED MAN DIRECTION IS JUDGED BY FACING TOWARDS THE WIND OR BY THROWING UP GRASS ETC. THE RULE FOR A BEGINNER IS TO ASK AN EXPERIENCED MAN

MARKING AND SCORING.

Efficient marking and scoring are necessary for good results on a range. Without such efficient work shooting is tedious and uninteresting. Now-a-days riflemen demand honest work, and any other kind immediately kills all interest. False marking or scoring is very rare on well conducted ranges and is easily detected. Riflemen complain immediately if their shots are incorrectly spotted and disked and coaches requiring men to call the shot detect any fraud in the pits at once.

Marking. The spotter should always be used in all fire where only one shot is fired at a target before it is marked. In addition to informing the rifleman where his shot has struck, the value of the shot as disked must agree with the spotter. The shot hole containing the spotter is not pasted until the spotter is removed after the next shot and an opportunity is thus given supervisors in the butts to examine the shot hole at any time before the next shot is fired.

With a telescope, those on duty on the firing line can actually see the bullets strike the target, and the telescope should be used on each target during a period of firing.

Another good plan is to have a good shot fire several shots on each target to check up the marking. Those in the butts can not tell who is firing and it is exceedingly unsafe for them to do improper marking.

For short and mid-range targets one man is sufficient to handle a target. The work will keep him busy but if he has a helper an argument will arise as to who is to do the work and it will be poorly done. Two men are required on long range targets because they require more work to operate them and are too large for one man to watch, and two men give quicker service.

For skirmish runs each marker should have a pencil and should mark a 6 over hits made at 600 yards; a 5 over hits at 500 yards, 4 at 400 yards, an x at 350 yards, &c.

The commands are given thus: "Stand by; up. Stand by; down. Mark a 6, two shots." The shot holes in skirmish should not be pasted until the scores are taken, and (except in matches), until the skirmishers have entered the butts and recorded the location of their hits.

In rapid fire a supervisor should visit each target successively and have the values disked in his presence. Disk the fives, then the fours, threes, twos and misses in that order.

When the butts wish firing to cease, all targets should be withdrawn, (half masted), the red flag put up and a message received from the firing line that firing has ceased before it is safe for any man to expose himself.

Scoring. All scoring should be done on a blackboard in plain view of all bystanders. Fraud without immediate detection is then impossible. Supervisors do not have to be immediately near the firing point to check the scoring at that point. They can observe the target from any point and then visit the score board and see if the scores are recorded properly.

It is not necessary to have a non-commissioned officer or even

a select man for scoring. The open board insures properly kept scores. The score card, or any method of keeping them in a book not held up to public gaze invites fraud.

When a shot is disked the scorer should announce loud enough to be heard by the firer and the bystanders, "Private ————. First sighting shot a five," or "Corporal ————. Tenth shot for record a miss."

Buzzers are not necessary on ranges; frequently they are misused by being pressed before the bullet reaches the target, and they make the markers inattentive. It is better to let the markers watch and keep on the alert. One telephone to a group of from ten to fifteen targets is sufficient.

Irritating messages to the butts only result in poorer work.

SIGHT SETTING.

Learn how to set the sights on your rifle. The numbers on the sight leaf refer to the lines below the numbers; for instance, the figure 6 is above the 600 yard mark. Practice setting your sight, especially the peep sight until you understand it thoroughly. Get an experienced man to show you. Set your sights for every twenty-five yards, and be careful to estimate the distance between the lines accurately for where there are no 25 yard lines you have to estimate where to set the sight and the least error will make a big difference in the shot. Then learn to set your windgauge; the marks on the windgauge are points and you will have to use quarter points in shooting. You must estimate it accurately.

Remember that the bullet is carried in the same direction that you move your windgauge. Winds carry the bullet with the wind, therefore, when you set your windgauge move it to the windward.

Suppose you hit the target to the right of the bull's-eye, you would then move your windgauge to the left so that the next shot would be to the left of the first one. This is easy to remember, and is very important. The bullet moves up or down with the elevation slide and to the right or left with the windgauge.

THE PEEP SIGHT.

When the battle sight is not required always use the peep sight. The peep sight is much more accurate and easier to use. You can never do very accurate shooting with the open sight, and its use among skillful riflemen, except at rapid fire, and skirmish, and other firing where the firing regulations require the battle sight to be used, has been entirely abandoned.

There are three sizes of peeps, Nos. 4, 5 and 6. For the average man a number 6 which is the largest one is the best. It is just as easy to centre the tip of the front sight in a large peep as a small one, and a large peep is easier to see through.

SIGHTING OR AIMING.

Learn to sight your rifle; that is how the sights and targets should appear when you aim. The illustrations on page 21 show you how to place the sights on the bull's-eye when using the peep sight; how to place your sights on the figure when using the open sight, but there are very few rifles which will permit you to aim directly at the figure with the battle sight, because you would shoot over the target, and in order to make a good hit you usually have to aim at the bottom of the entire target as shown in the third illustration, and with some rifles you may have to aim still lower.

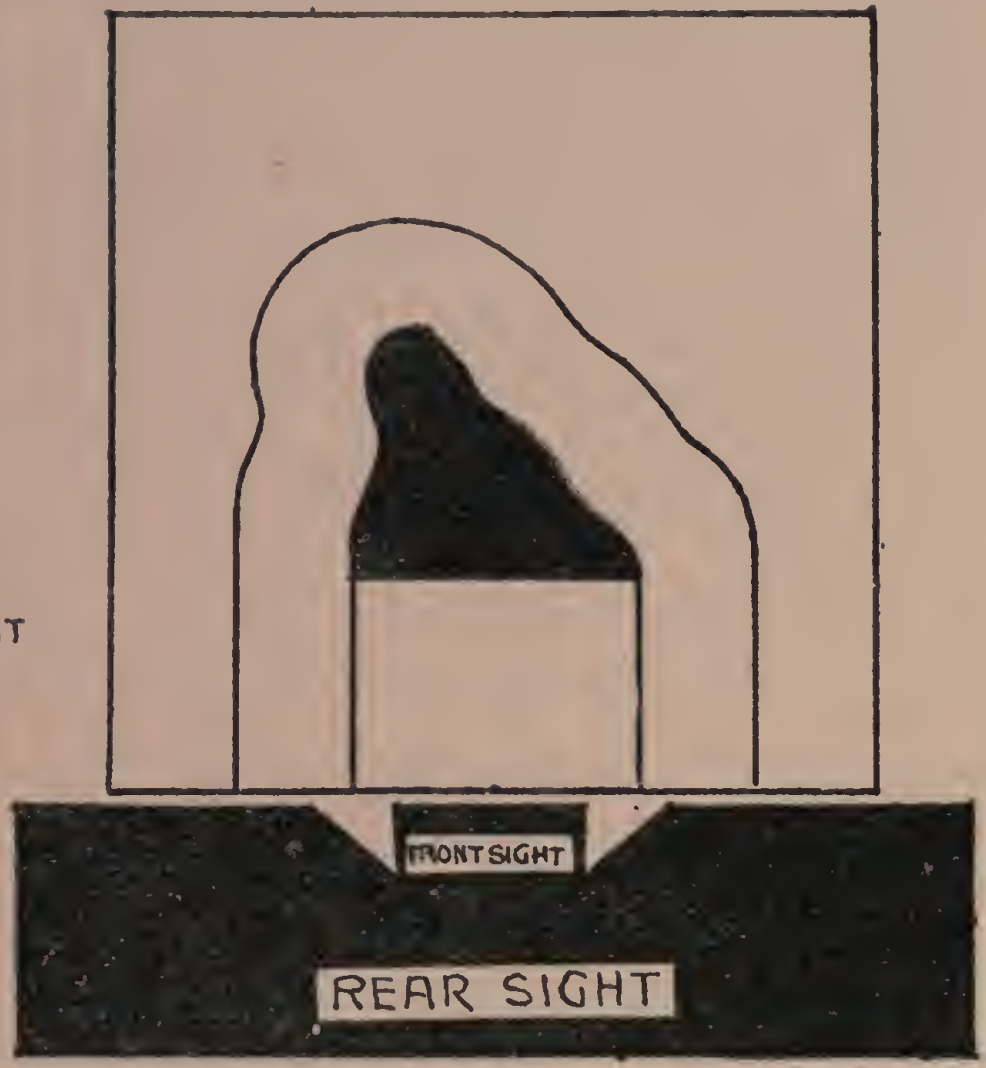
PEEP SIGHT

B — BULLS EYE
F — FRONT SIGHT

OPEN SIGHT

SHOWING AIM TAKEN AT FIGURE

SHOWING THE AIM WITH THE BATTLE SIGHT TAKEN AT THE BOTTOM OF ENTIRE TARGET



NOTE IN ORDER TO HIT FIGURE THE AIM USUALLY HAS TO BE TAKEN AT BOTTOM OF TARGET AS THE RIFLE WITH THE BATTLE SIGHT SHOOTS HIGH

With the peep sight always hold the tip of the front sight in the center of the circle of the peep and let the bull's-eye sit upon it. It is not a good plan to leave a line of white between the bull's-eye and the top of the front sight. It is not correct to center the bull's-eye in the peep and then hold the front sight under it; the tip of the front sight should always be in the center of the peep. In using the battle sight or any other open sight always have the top of the front sight in the middle of the notch in the rear sight, and flush or even with the top edge of the rear sight. There should be no such thing as fine sight or full sight.

When using any open sight always use the one described above (the one called "half sight" in the firing regulations.) The battle sight is supposed to be so that you could aim directly at the figure at 530 yards, but in practice you will find that even at 500 yards you will have to aim below the figure, and still lower at the shorter distances. The sights are blackened by smoking them. A candle is the best thing, a match will do. Blacken both the front sight and the rear sight. The black will not take on metal if the metal is greasy. Rub off the oil; a rag dampened with gasoline quickly removes it. Candles or wax tapers are usually provided at cleaning racks or ranges. The oiled rags which have been used to clean rifles make an excellent smoke for blackening the sights.

HOLDING THE RIFLE.

Padding. The elbows of both arms and the right shoulder of the shooting coat or blouse should be padded.

A coat is better than a woolen shirt for shooting. Padding will not injure a coat. The padding can be basted on and can be removed when the course is finished. Then you will not soil or wear holes in the elbows of the sleeves and your own elbows and shoulders will not become sore and cause you to flinch when you shoot; old bandoleers furnish a suitable material for padding.

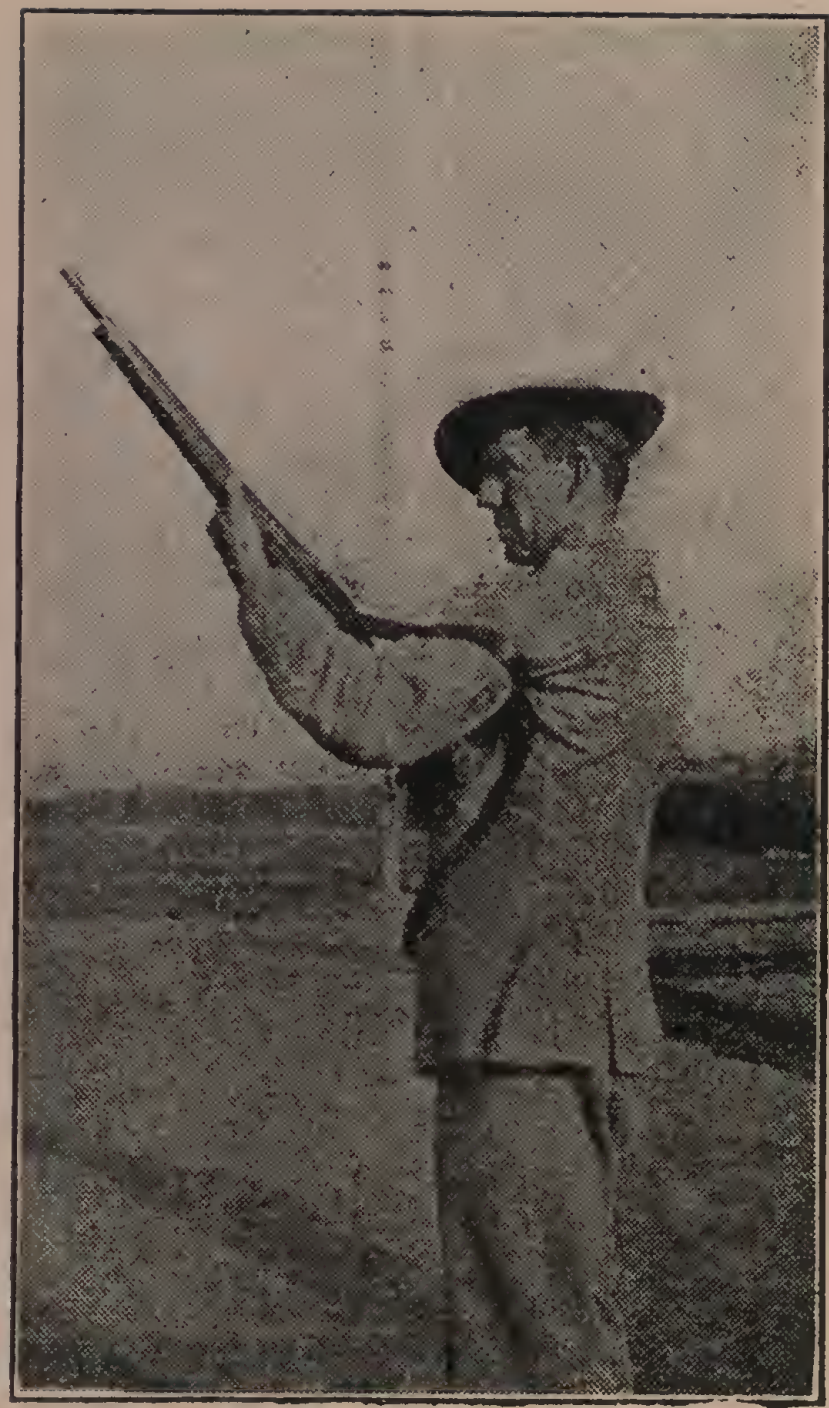
The Sling. The sling is used in all your firing. You cannot do good work without it, and you should never fire a shot without the assistance of the support of the sling. In all positions except standing the length of the sling should be such that the loop of bight comes even with the comb of the stock. Beginners will complain that this is too short, but it becomes easy after practice. If the sling is too long your position will not be steady and unless it is tight the rifle will kick.

In all positions when aiming, the thumb of the right hand should be along the small of the stock, and not across it. If it is across the stock the recoil brings the thumb against the face or nose.

It is difficult to describe the various positions so that a man can take them without being shown. Get an experienced man to show you.

GUNNERY SERGEANT HENRY BAPTIST illustrating the proper adjustment and length of the loop of the sling. Notice the padding on the shoulder and elbow.

GUNNERY SERGEANT BAPTIST slipping his hand into the loop.



The loop well in the arm pit, and the left hand well up to the lower swivel.

The Prone Position. The main secret of shooting prone is to get a good solid, hard hold. Then you cannot fail to make a good score. Nearly every man who is being taught to hold hard thinks at first that he will never be able to do so, but it is surprising how quickly it is learned. A few minutes persistent work on a man will teach him how to hold good enough to become a good prone shot. Prone is the very steadiest position and for that reason it is first taught a man, and it is a good idea to let him do his first firing at 500 prone, because there he will make a good score, will find that the rifle does not kick and will not hurt him, and he will get confidence in himself and his rifle.

The main points are: Slip the left hand well under the rifle and all the way up to the lower swivel. That part of the sling which bears against the hand should be clear of the metal nibs and of the keepers, because they will cut into the hand and cause pain. The pressure of the hand against the swivel causes a little pain at first, but it soon disappears, and a man should not resist it or try to pull his left hand away from it. The piece rests hard in the flat of the hand and not on the fingers. The left hand and the fingers of left hand do no work at all. The fingers should rest loosely. If they are rigid the tremor will be communicated to the muscles of the left arm and to the rifle. Lie flat down at an angle of about 45 degrees to the firing line, spread the legs wide apart and turn the heels inboard. Flatten the middle parts close to the ground. Place the point of the left elbow to the front, and well to the right, otherwise you will have trouble in getting the rifle to the shoulder, then raise the right shoulder and placing

the right hand on the butt plate, put the butt of the rifle in the shoulder, and flatten out again. Put your cheek or jaw hard against the small of the stock, the thumb of the right hand along and not across the stock and the right eye right up to the firing pin, as close to the peep sight as possible. Let the right elbow spread out as far as it will go and drawing the body back get your chest and whole body as flat on the ground as possible. The left elbow must be directly under the rifle. The right elbow is moved out or in to raise or lower the muzzle. Now the rifle cannot kick you. The only recoil will be that of your whole body, which you will not feel. To do rapid fire prone or in skirmish keep the piece in the shoulder. To load, lower the muzzle to the right, and work the bolt, being careful to draw it fully back, so it will eject the empty shell, and not cause a jam. You will be surprised how easy it becomes after practice.

GUNNERY SERGEANT BAPTIST placing the butt in the shoulder.

The prone position.

Operating the bolt; piece remaining in shoulder.

Sitting. This is a very comfortable and steady position.

There are more varieties in this position than in any other. Every man must find the position which fits him the best. The main points are to keep adjusting yourself until you find a position which fits you exactly, so that the legs are at rest and the leg muscles not strained in order to get the rifle up to the right place. Lean the body well forward in all the positions. Except in the one with the legs crossed, the point of the left elbow should be over the left knee and the right elbow in a snug place inside the right knee. Study the positions illustrated and especially the positions of the feet and elbows.

FIRST LIEUTENANT W. D. SMITH. The point of his left elbow does not rest on his knee, the side of his elbow rests against the side of his knee.

GUNNERY SERGEANT PETER LUND. The body leans well forward.

GUNNERY SERGEANT FREDERICK V. WAHLSTROM. The left heel is braced in the right instep, both knees drop naturally, body well forward. This is an excellent position.

First Sergeant Thomas F. Joyce. An easy and steady position.

Corporal Tom Worsham. The soles of his shoes brace against each other. Notice how well the rifle is held.

Kneeling. This position is uncomfortable until practiced; it quickly ceases to be uncomfortable.

Main points. The right knee should point directly to the right, that is along the firing line. The point of the left elbow should rest over the knee. There is a flat place under the elbow which fits a flat place on the knee, and makes a solid rest. Lear the body well forward.

SERGEANT WILLIAM A. FRAGNER. (Winner of President's Match, 1910.)

GUNNERY SERGEANT WAHLSTROM.

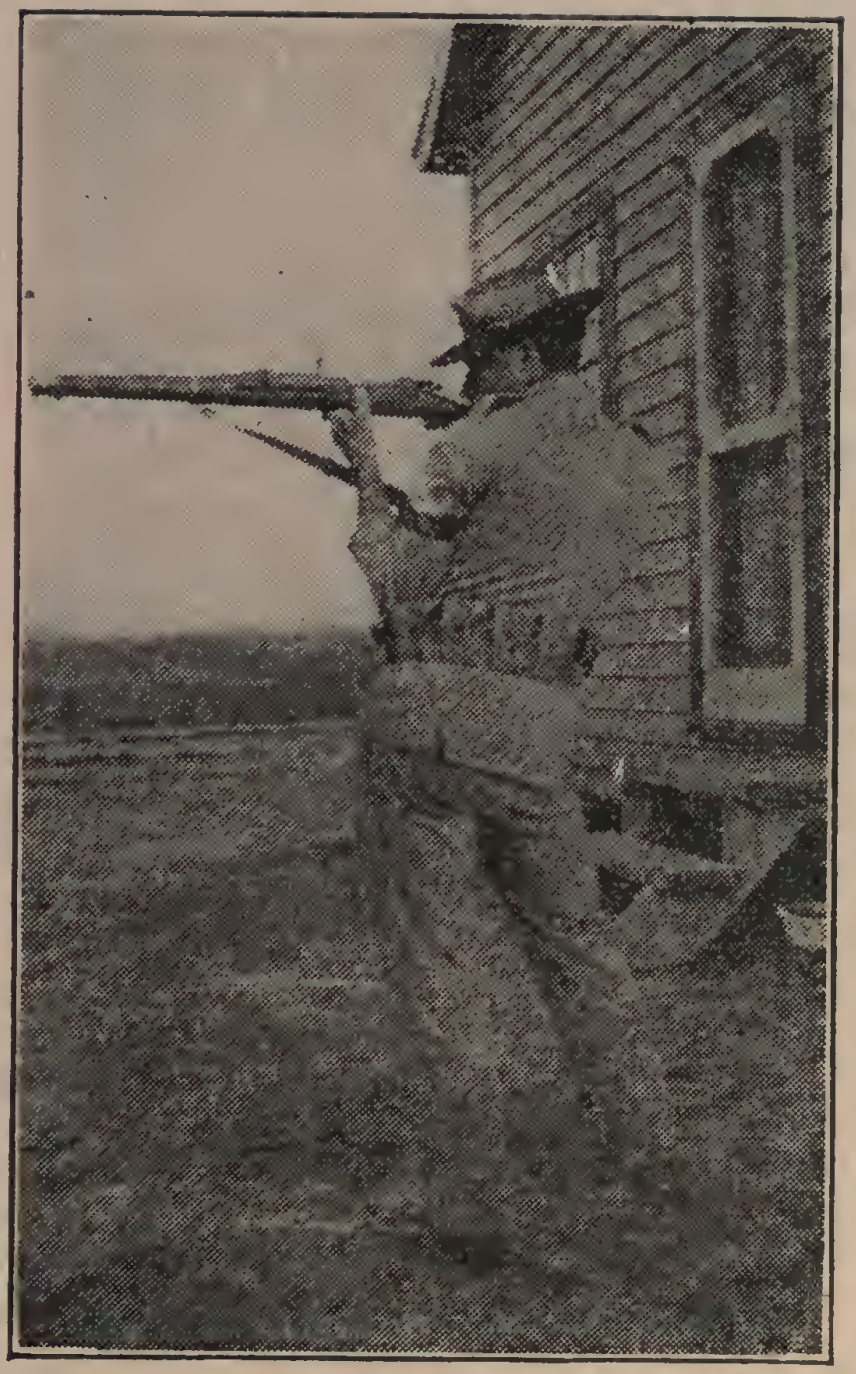
CORPORAL WATT G. HIGGINBOTHAM, showing rapid fire kneeling. The piece remains in the shoulder.

Standing Position. Main points; right foot to rear and to the right, right knee bent, left knee straight, left elbow resting in belt, left arm against the body, using the body and belt for a rest. This position feels awkward at first but the best riflemen use it, and it ceases to be awkward after a little practice. The rifle is held up on the fingers of the left hand in this position, very few men being able to hold it in the palm of the hand. Constant practice in snapping is more essential in this position than any other. It is the most difficult position for steady holding.

The sling may be longer in this position than in any other, and each man can find for himself what length suits him the best.

CORPORAL GEORGE W. FARNUM. (Winner United States Military Championship, Camp Perry, Ohio, 1910.) Notice how the piece is supported by the fingers of the left hand.

CORPORAL FARNHAM. Another way of supporting rifle on left hand.



SERGEANT FRAGNER. Notice the hip, body and belt rest.

GENERAL REMARKS ON ALL POSITIONS.

Before you go to the firing line you should **remove the oil from the bore,** by passing a rag through it. Dampen the rag with gasoline if gasoline is provided; clean and freshly oil your bolt so that it will work smoothly for rapid fire. Be careful to remove all oil from bolt handle so that you can grip it firmly.

Don't dig holes on any firing line. Other people have to shoot on the same firing line, and if holes are dug on it the firing line will soon become a mass of holes to the discomfort and annoyance of everybody.

Look at the bullets each time you load and be sure that there is no grit or dust on them. Grit or dust will scratch and ruin a bore.

Never cant the rifle. Keep it plumb. If you cant it the least bit the bullet will strike in the direction of the cant.

Hold the breath while aiming. Take about half a breath. If you aim too long you will become unsteady and your eyesight will get worse. Take the piece from the shoulder, rest and aim again. Don't look at the targets any more than is necessary. Rest the eyes by looking down on the ground.

Focus your eyesight on the targets, and not upon the sights. Look *through* the peep, not *at* it. You can center the top of the front sight in the peep instinctively; that is without any effort or thought, that is the natural way to hold it. The little scratched line on both sides of the peep is for use in setting the elevation, and you should pay no attention to it in aiming.

Hold directly under and on the bull's-eye, that is let the bull's-

eye sit on top of the front sight. It is a mistake to try to have a line of white between the bull's-eye and the top of the front sight.

Squeezing the trigger. There is a little slack in the trigger. When aiming take this up with the finger so that when you wish to fire you have only to increase the pressure of the finger.

Always snap in once or twice. Before firing cock the piece, and with the piece unloaded squeeze the trigger. This will steady you down and get you better acquainted with your trigger pull.

Do not yank or pull the trigger, squeeze it easily by squeezing gently the whole small of the stock with your right hand. Let the trigger off as easy as you can, and keep up the aiming while the gun is being discharged, then you can tell where you were aiming when the bullet left the rifle.

Call the shot. As soon as you have squeezed the trigger, and before the target is marked, "call the shot," that is call out loud where you were aiming when the trigger was squeezed, and when the bullet left the rifle. Say something like this, "good pull," "bad pull," "right," "high," "left and low," or call the o'clock of the target where you expect the hit to be as "5 o'clock" for a low and right hit. Be sure to say something at once, and if you have no coach or shooting partner say it aloud to yourself. A man who intends to call the shot will not shut his eyes when he squeezes the trigger. He will not quit aiming while he is squeezing the trigger. He will not flinch; calling the shot is the best cure for flinching. Make up your mind to continue aiming while the piece is being fired. Calling the shot will help you do all these things. It is very important and the habit should never be neglected, not even in rapid fire.

ZERO OF RIFLE.

When there is no wind some rifles require that the wind gauge be set to the right or to the left in order to hit the object aimed at. For instance, when there is no wind, and in order to hit the point aimed at, the wind gauge of the rifle is set at ½ point right, it is said to have a zero of ½ point right, and in setting the sight for windage this has to be taken into consideration. Suppose the zero of the rifle is ½ right and you are shooting in a wind that requires 1 point right windage, you would then set your wind gauge at 1½ right, and if you are shooting in a wind requiring 1 point left windage, you would set your wind gauge at ½ point left. You can learn the zero of your rifle by asking an experienced man what windage the wind requires and then find by firing the rifle where your wind gauge must be set. The difference will be the zero of your rifle; you can check it up by comparing it with the windage used by other men shooting at the same time.

Beginners need not worry about the zero of the rifle, because for the short and mid range work of the marksman course they will hit the target without knowing the zero and they can correct for windage after the target is hit. On skirmish it is of great importance only at 500 and 600 yards, where only four of the twenty shots in the skirmish run are fired. The zero of most rifles is at zero and it is seldom over ¼ right or left and is not enough to make any great difference at short range, but for accurate skirmish work, where it is important to get hits at 500 and 600 yards, the zero should be known.

Usually the zero at 600 yards is the zero at all ranges, but

there are a few troublesome rifles which have different zeros at different ranges. The rifle used by Corporal Farnham in winning the U. S. Military Championship at Camp Perry, Ohio, in 1910, had a zero of ¼ left at 600 yards and ¾ left at 500 yards, but such a case is very rare.

Five hundred yards is the best range to determine the zero of the rifle, and the best time is when the sun is not shining.

For slow fire it is not so important as in skirmish, because after once you hit the target you can change your windage so as to get into the bullseye, but when shooting in pairs men can help each other better in difficult winds if they know the zero of their rifles.

KEEPING THE SCORE BOOK.

Remember that the elevation marks on the rear sight of a rifle are not where the sight is always set at the different ranges. For example: When shooting at 600 yards you may have to set the sight of your rifle at 650 or 550, or even higher or lower. In other words, you must learn the elevation of your rifle at all ranges.

You should carefully record the elevation used in the column marked "Elevation" or "Elev.," so that you will know how to set the sight the next time you shoot at that range. Changes in weather conditions may require slightly different elevations at different times during the firing of your score and on different days.

A record of elevations in your score book will be valuable to you for future reference.

Study the specimen score sheets. It is important to fill out every space and you will soon be able to find the zero of your rifle after shooting a little.

Use figures for dates, thus: September 12, 1910, is written 9-12-10.

The kind of ammunition is recorded thus: F. A. 1910, which means ammunition manufactured by the U. S. Government at the Frankford Arsenal in 1910.

Mirage is recorded as heavy (H), medium (M), or light (L), and where none is visible as "O."

Light is entered as bright (B) if the sun is shining; dull (D) if cloudy.

Dashes (—) in columns marked "Elev." (elevation) and "W. G." (wind gauge) indicate no change.

Indicate in the column marked "Pull" by a dot (.) or a cross (X) where you called the shot.

Write any notes you wish to remember over the face of the diagram of the target. The figures at the bottom of the diagram of the target show how many points of windage to change to bring your hits to the center of the bullseye; the figures on the side show how many yards to change the elevation. Make changes cautiously; that is, a little less change than is shown to be called for, and unless you are quite sure of your pull do not change unless two shots have gone near the same place or unless your shots are grouping in such a way as to make a change advisable. It is better not to change for one shot a little wild.

RIFLE NO 41673.5 ZERO 1/2 LEFT

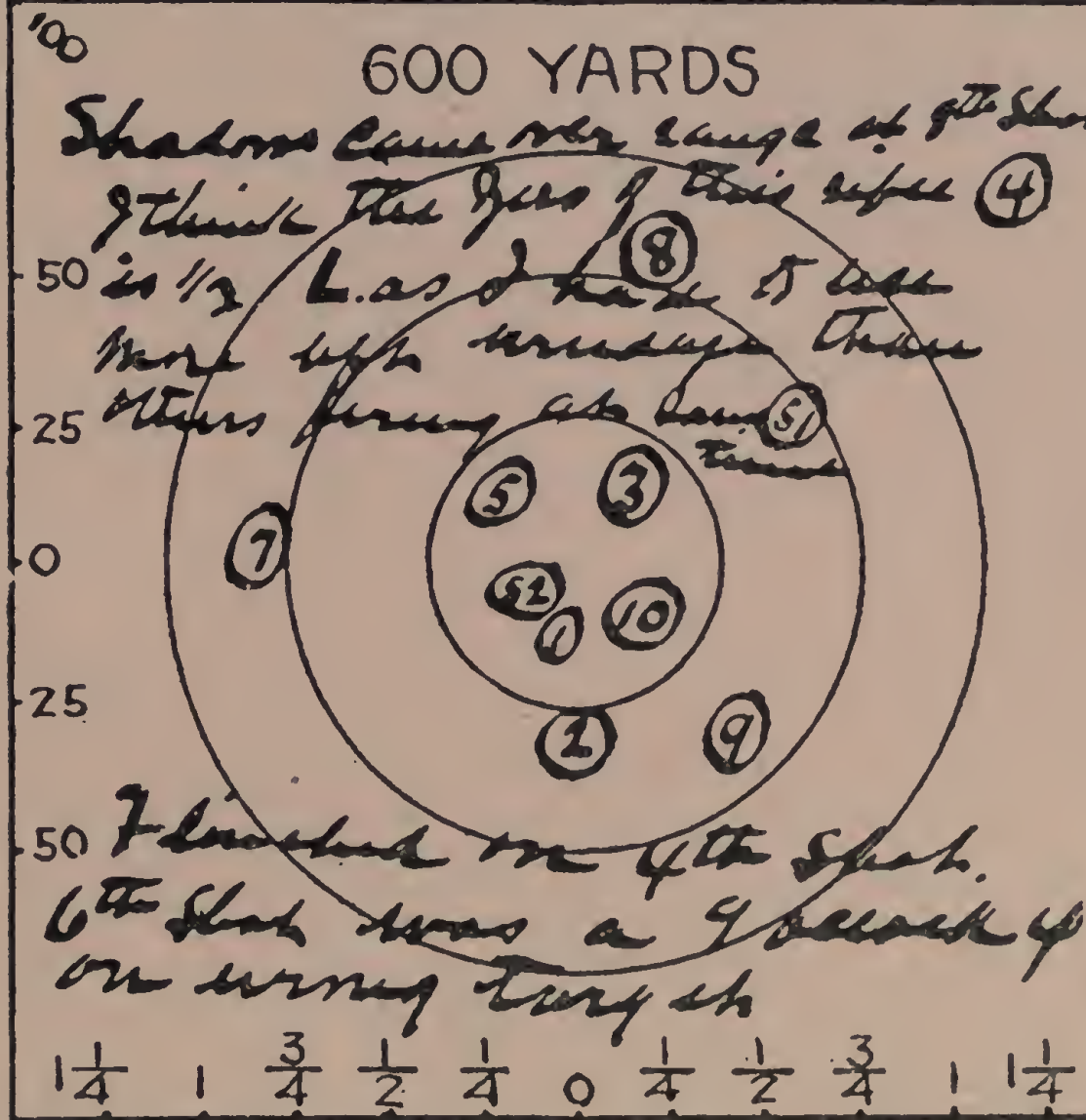
PLACE Winthrop DATE 10/18/10 HOUR 3 P.M.

AMMUNITION F.A. 1910.

EVENT Ins. Landing Practice. Rifle Course

600 YARDS

Shadows came over range at 9th Shot. I think the Zero of this rifle is 1/2 L. as I had to use more left windage than others firing at same time



I finished on 4th Shot. 6th Shot was a 9 oclock 4 on wrong target

NO	Elev	W.G.	Pull	VALUE
S	550	3/4 L		~~4~~
S	525	1 1/4 L		~~5~~
1	–	–		5
2	–	–		4
3	550	–		5
4	–	–		2
5	–	–		5
6	–	–		0
7	–	–		3
8	–	1/2 L		3
9	–	–		4
10	–	–		5
TOTAL SCORE				36

WIND 9 OCLOCK 5 MILES MIRAGE Light

LIGHT Bright - Target bright

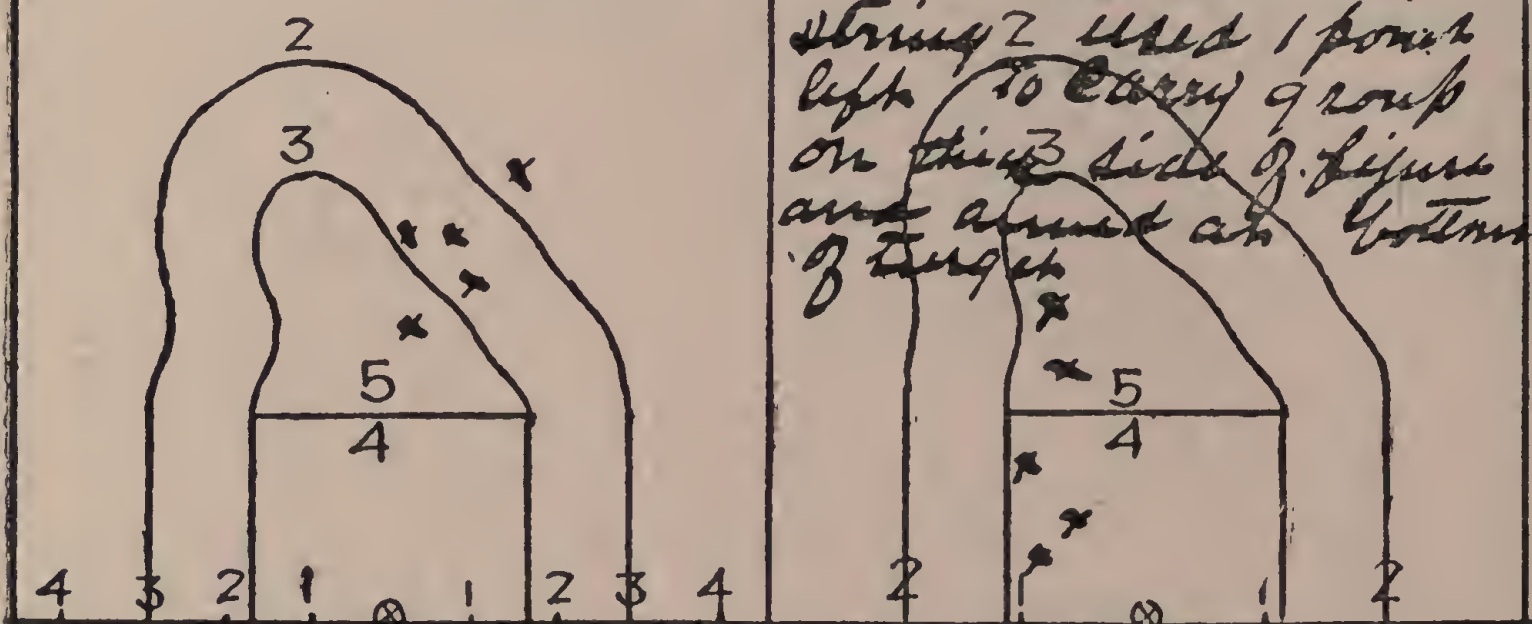
Wind began to die out about 6th Shot No wind at end

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

RIFLE NO 414012 ZERO 0 PLACE Winthrop
AMMUNITION 7 1910 DATE 10/19/10 HOUR 10 a.m.
WIND 8 OCLOCK 7 MILES W.G. 1/2 L LIGHT Bright

RAPID FIRE 300 YARDS Target Shaded

BATTLE SIGHT On second string 2 used 1 point left to carry group on this 3 side of figure and aimed at bottom of target



POINTS OF WINDAGE 200 YARDS | POINTS OF WINDAGE 300 YARDS

SCORE	5	3	3	3	2	5	5	4	4	4	TOTAL	38

USE BAYONET AT 200 YDS – KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE.
BY SIGHTING IN PRONE YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE.
300 YDS WITHOUT BAYONET – POSITION SITTING OR KNEELING.
TRY TO GET THE FIRST SHOT OFF GOOD. TAKE TIME TO GET GOOD POSITION.
TIME LIMIT 200 AND 300 MARKSMANS COURSE 20 SECS – 500 YDS SS COURSE 30 SECS

EVENT Mks Course Instruction Practice

RIFLE NO 416735 ZERO 1 1/2 R. PLACE Winthrop
AMMUNITION F.A. 1910 DATE 10/21/19 HOUR 2 P.M.
WIND None O'CLOCK —— MILES MIRAGE Light LIGHT Bright

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING
AFTER FIRST SHOT
SKIRMISH ELEVATION USED AT 600 500

Shot only 4 shots at 200
Pulled off one at 300
Forgot reloading at 400.

RANGE	NO SHOTS	FIVES	FOURS	OTHER HITS	MISSES
600	2	—	2	—	—
500	2	1	1	—	—
400	3	1	—	2	—
350	3	1	1	1	
300	5	1	2	1	1
200	5	1	3	—	1
TOTAL	20	5	9	4	2
VALUE	X	25	36	TOTAL SCORE	61

USE PEEPSIGHT AT 600 YDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLE SIGHT AT ALL OTHER SKIRMISH RANGES — AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE 600 & 500 YD HITS WERE .. ..OTHER TARGETS FOR WINDAGE

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

IMPORTANT RANGE RULES.

Here is a copy of a chart used at Marine Corps Rifle Range, Winthrop, Maryland. It covers those things which have to be repeated over and over again on the range. It is well to read this every day before going to the range:

Blacken your sights.

Have your rifle clean and free from oil.

Have pencil and score book.

Study the diagram target before shooting at each range.

Ask an experienced shot what windage to start with.

Tell scorer your name and initials and watch him write it.

Do not snap behind the line. If you wish to snap at target get fully abreast of the firers.

Keep rifle unloaded when not on firing line.

Keep your ammunition clean and in the shade.

Keep muzzle to the front whether loaded or not.

Squeeze the trigger and get each shot off without a jerk.

Try to maintain aim during firing. This will cure flinching.

Call each shot aloud at once. If you have no coach, call it aloud to yourself.

Do not eject the empty shell or reload until the moment for firing the next shot.

Pay strict attention to the scorer when he announces your name and value of your shot.

When your score is finished examine your score and total on the score board.

When you leave the range go at once to the cleaning rack.

.....YARDS

INDEX OF CONDITIONS RIFLE NO..... ZERO.....

PLACE	DATE	HOUR	AMMUNITION	WIND O'CLOCK	WIND MILES	MIRAGE	LIGHT	ELEVATION	W. G.	SCORE

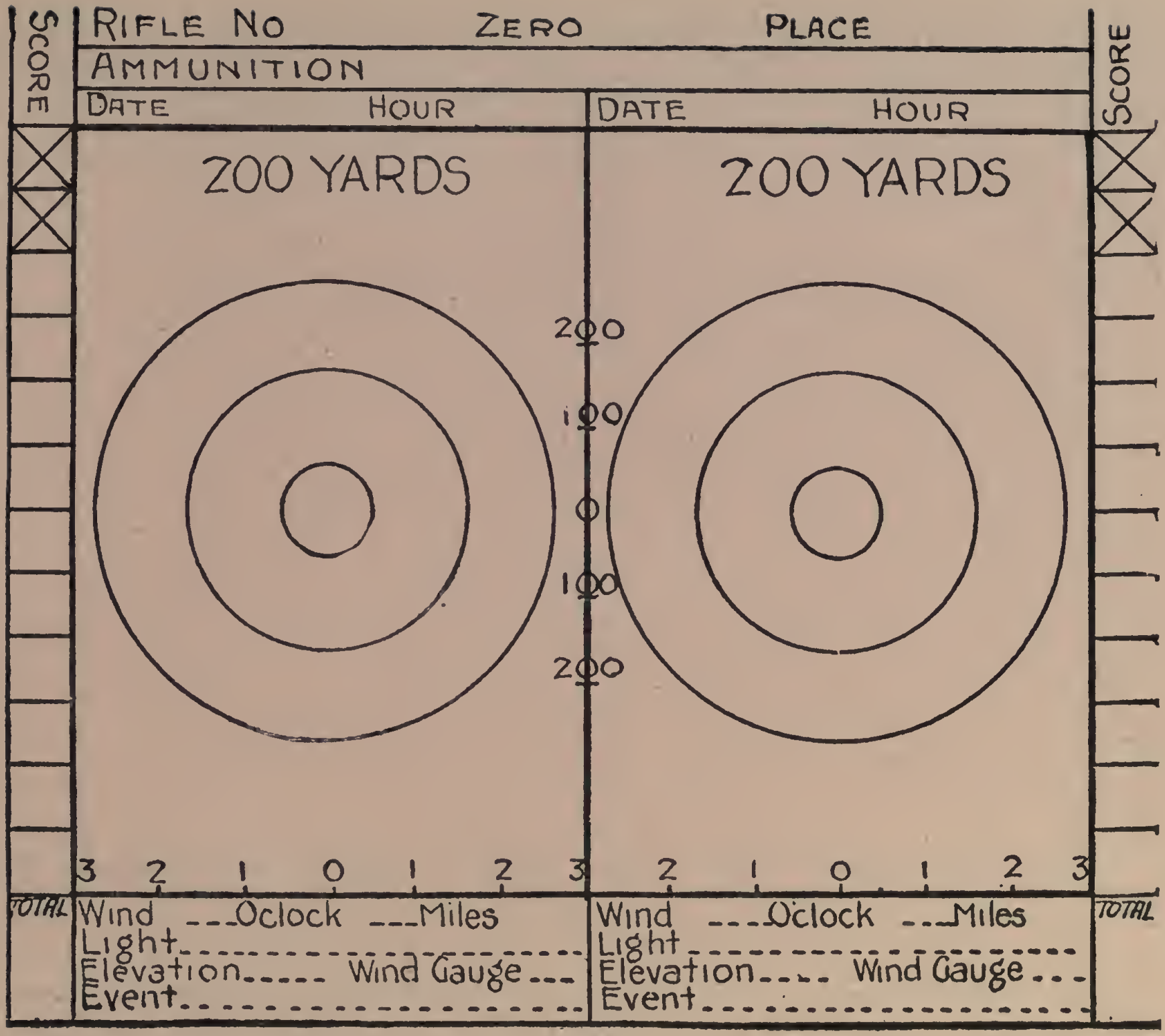
AN INDEX OF CONDITIONS IS USUALLY USED BY THE MOST EXPERT SHOTS. WITH THE GOOD AMMUNITION NOW ISSUED ANY PREVIOUS ELEVATION WILL USUALLY HIT THE TARGET, AND THE BULLS EYE SHOULD BE FOUND BY THE SIGHTING SHOTS. AN INDEX IS OF NO USE AT SHORT RANGES BUT AT LONG RANGES IT IS OF CONSIDERABLE AID AND IS ALWAYS INTERESTING FOR THE STUDY OF YOUR RIFLE. IT ENABLES YOU TO SEE AT A GLANCE WHAT PREVIOUS DAYS SHOOTING WAS DONE UNDER THE CONDITIONS NEAREST TO THOSE OF THE PRESENT DAY AND TO DECIDE HOW TO SET YOUR SIGHTS.

.....YARDS

INDEX OF CONDITIONS RIFLE NO..... ZERO.....

PLACE	DATE	HOUR	AMMUNITION	WIND O'CLOCK	WIND MILES	MIRAGE	LIGHT	ELEVATION	W. G.	SCORE

AN INDEX OF CONDITIONS IS USUALLY USED BY THE MOST EXPERT SHOTS. WITH THE GOOD AMMUNITION NOW ISSUED ANY PREVIOUS ELEVATION WILL USUALLY HIT THE TARGET. AND THE BULLS EYE SHOULD BE FOUND BY THE SIGHTING SHOTS. AN INDEX IS OF NO USE AT SHORT RANGES BUT AT LONG RANGES IT IS OF CONSIDERABLE AID AND IS ALWAYS INTERESTING FOR THE STUDY OF YOUR RIFLE. IT ENABLES YOU TO SEE AT A GLANCE WHAT PREVIOUS DAYS SHOOTING WAS DONE UNDER THE CONDITIONS NEAREST TO THOSE OF THE PRESENT DAY AND TO DECIDE HOW TO SET YOUR SIGHTS.


SCORE
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PLACE
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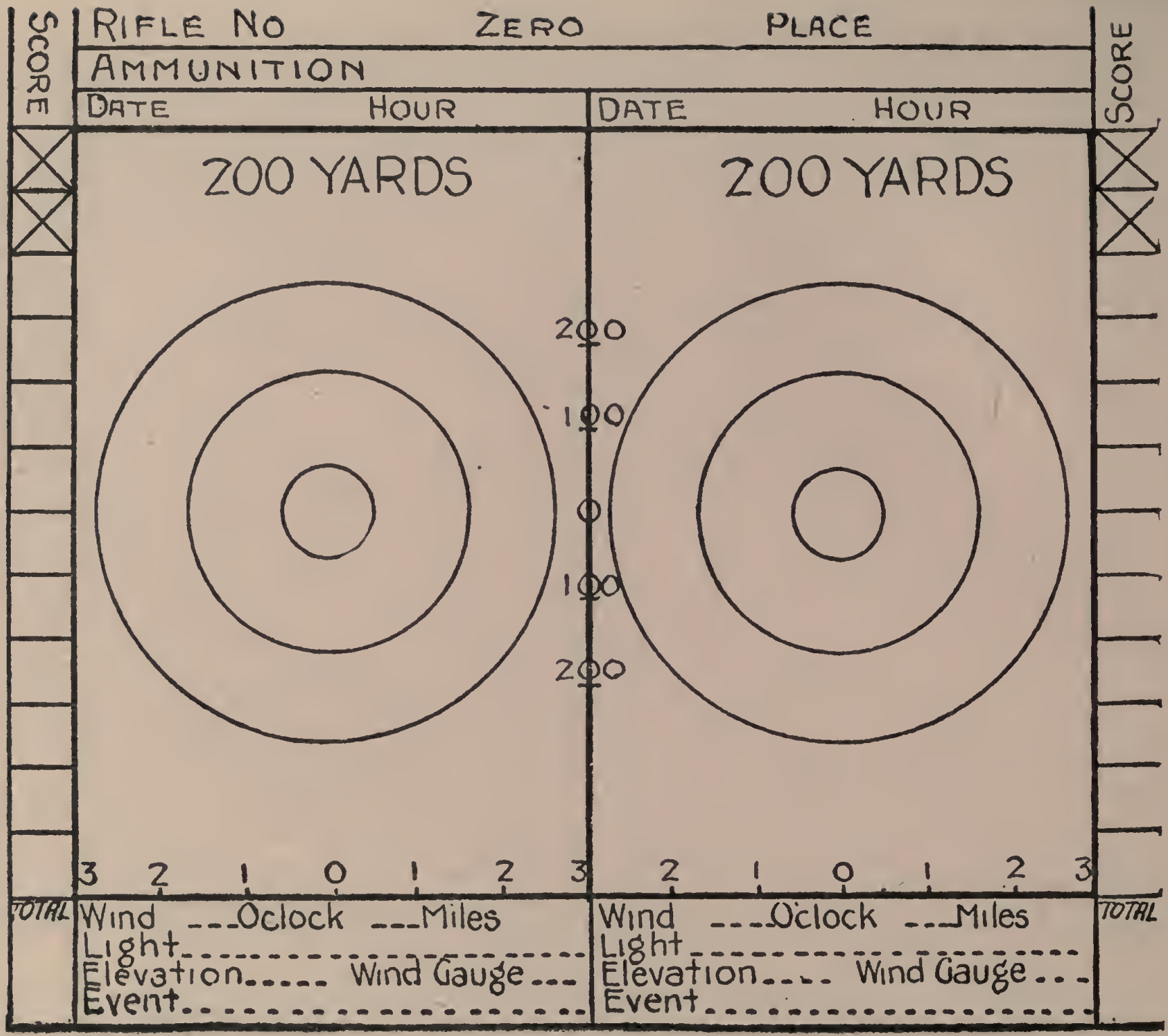
DATE
HOUR
DATE
HOUR
SCORE
200 YARDS
200 YARDS
200
100
0
100
200
3 2 1 0 1 2 3
2 1 0 1 2 3
TOTAL
Wind ___Oclock ___Miles
Light
Elevation_____ Wind Gauge___
Event
Wind ___Oclock ___Miles
Light
Elevation_____ Wind Gauge___
Event
TOTAL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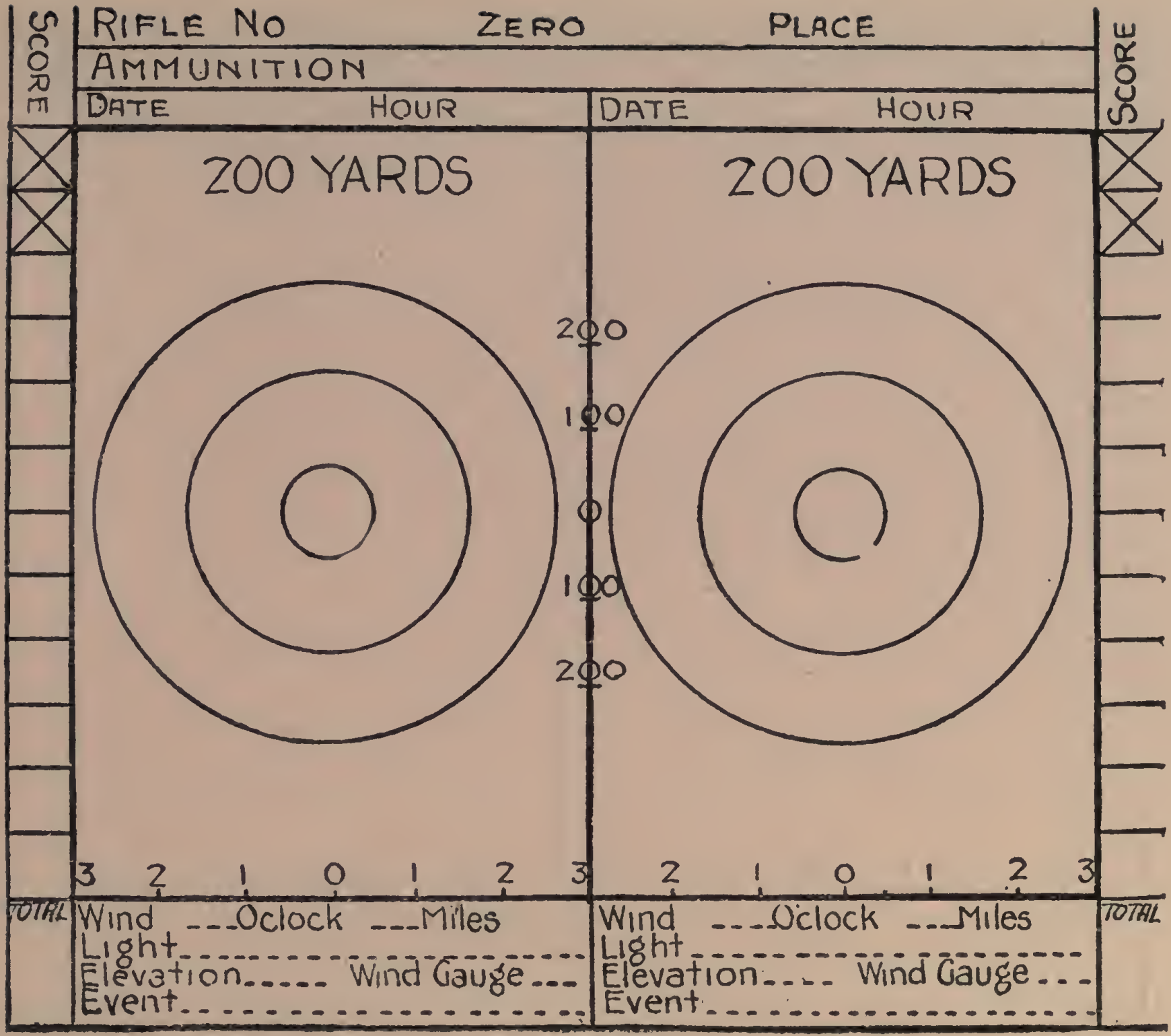
3 2 1 0 1 2 3
2 1 0 1 2 3
TOTAL
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
TOTAL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200 YARDS
200
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3 2 1 0 1 2 3
2 1 0 1 2 3
TOTAL
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
TOTAL

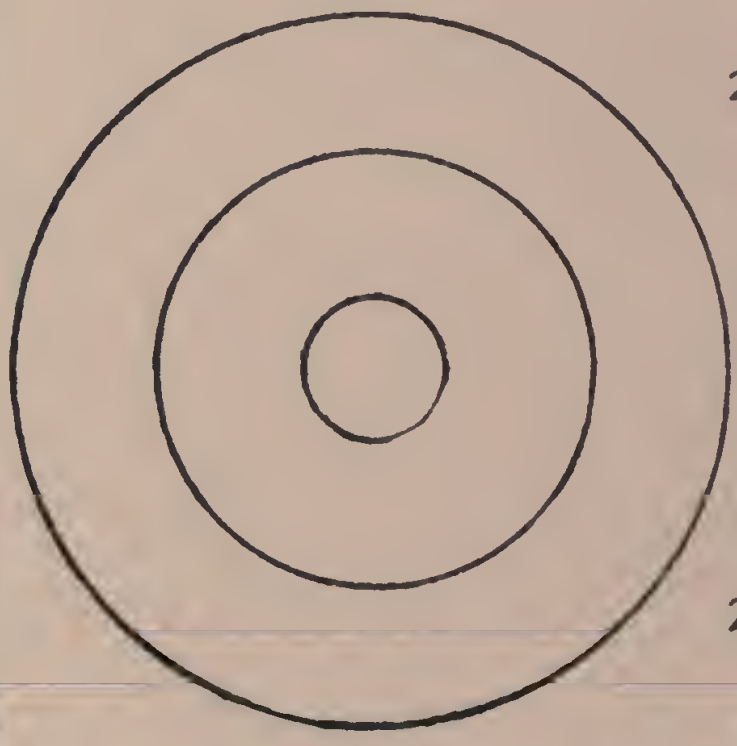
SCORE

RIFLE NO ZERO PLACE

AMMUNITION

DATE HOUR

200 YARDS



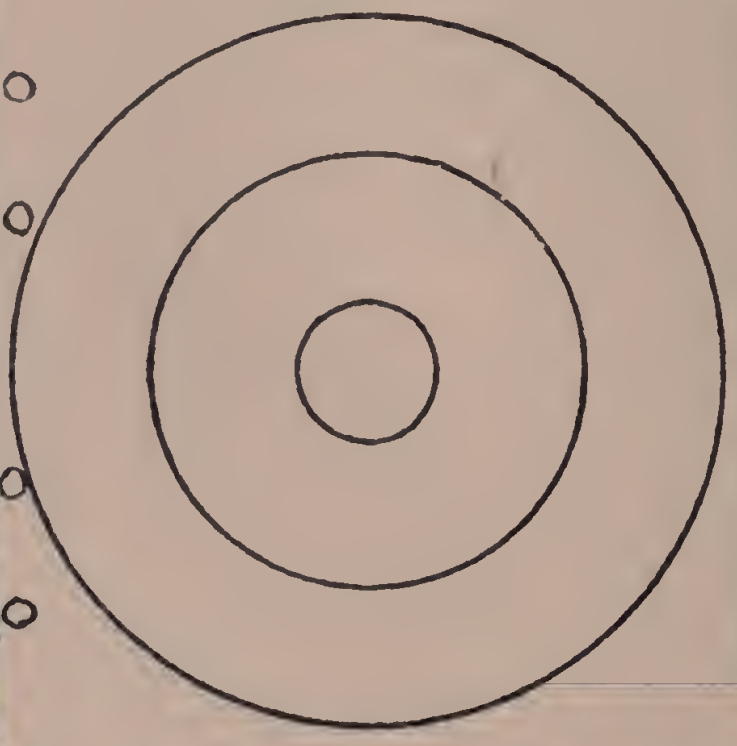
3 2 1 0 1 2 3

TOTAL

Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event

DATE HOUR

200 YARDS



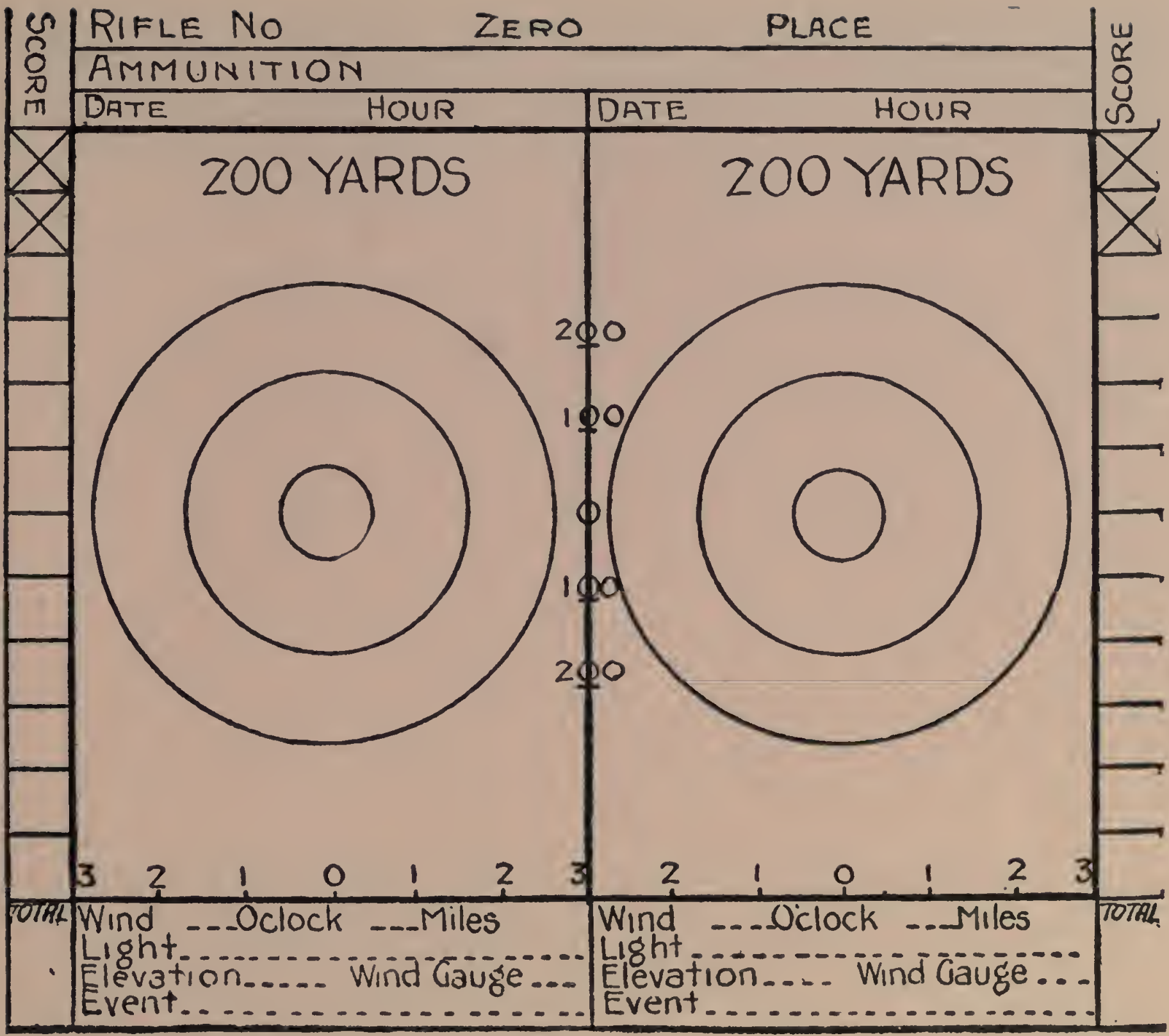
200
100
0
100
200

2 1 0 1 2 3

SCORE

TOTAL

Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event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AMMUNITION
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HOUR
SCORE
200 YARDS
200 YARDS
200
100
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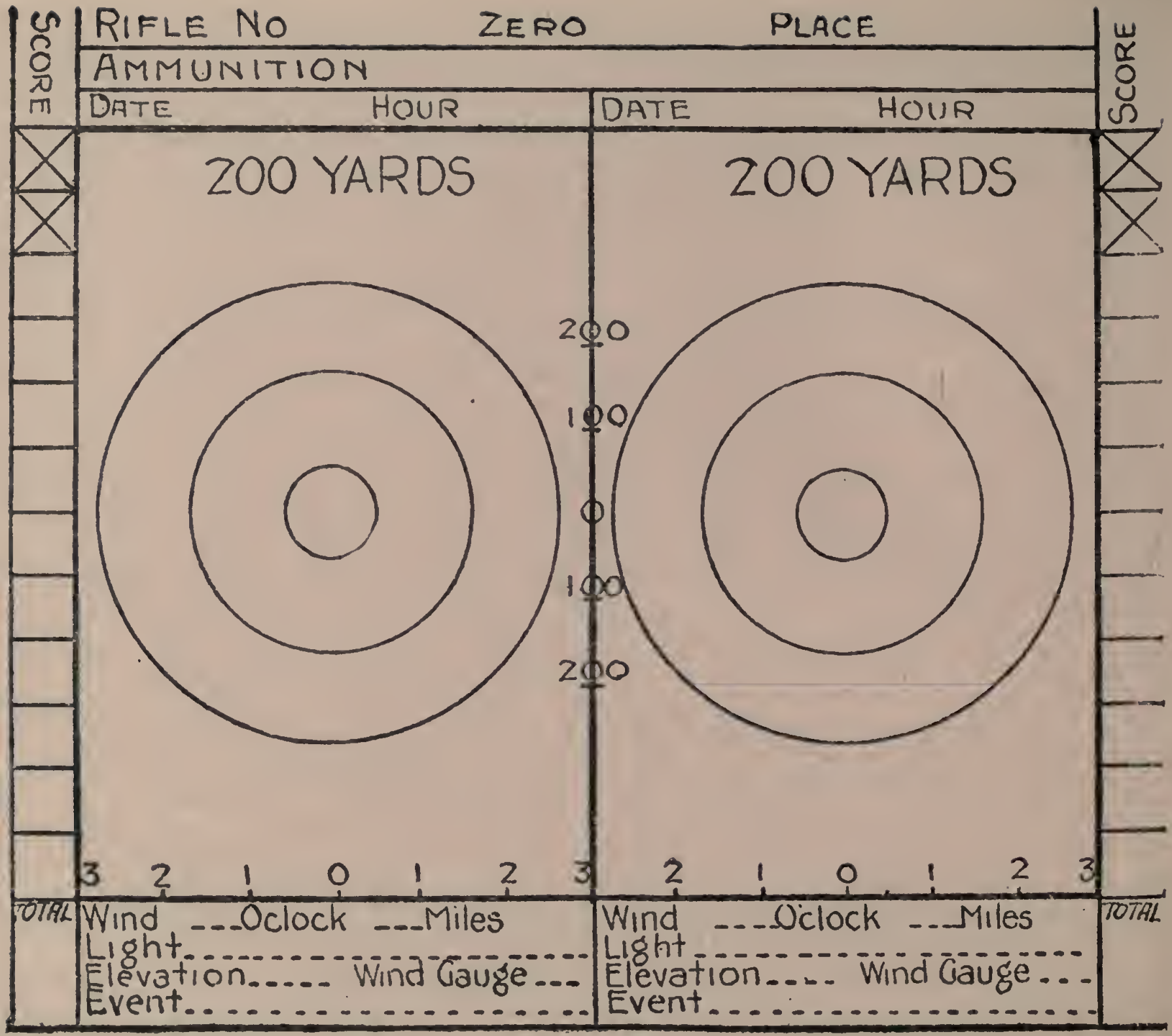
200
3 2 1 0 1 2 3
2 1 0 1 2 3
TOTAL
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
TOTAL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PLACE
AMMUNITION
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SCORE
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200 YARDS
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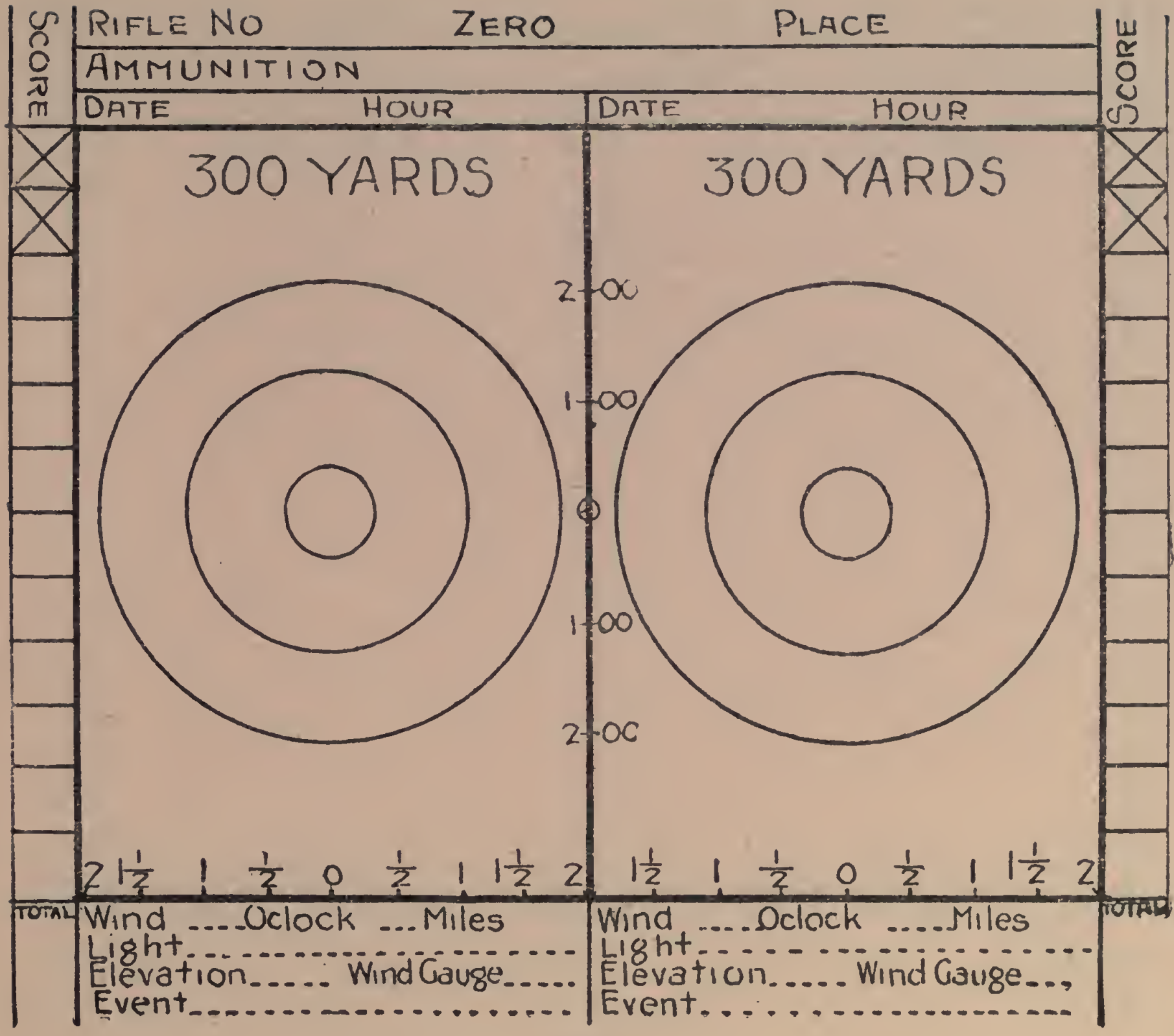
3 2 1 0 1 2 3
2 1 0 1 2 3
TOTAL
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
TOTAL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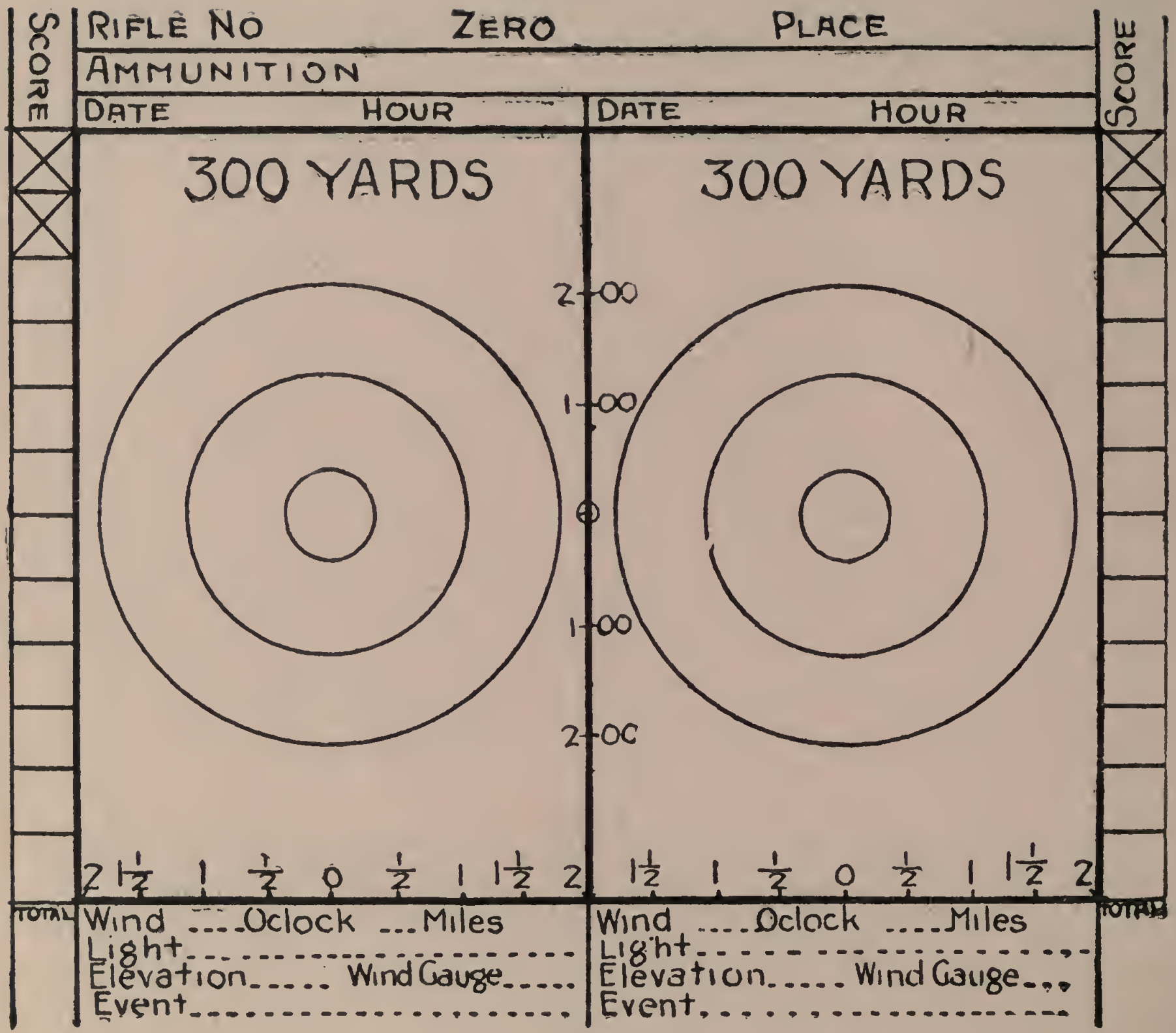
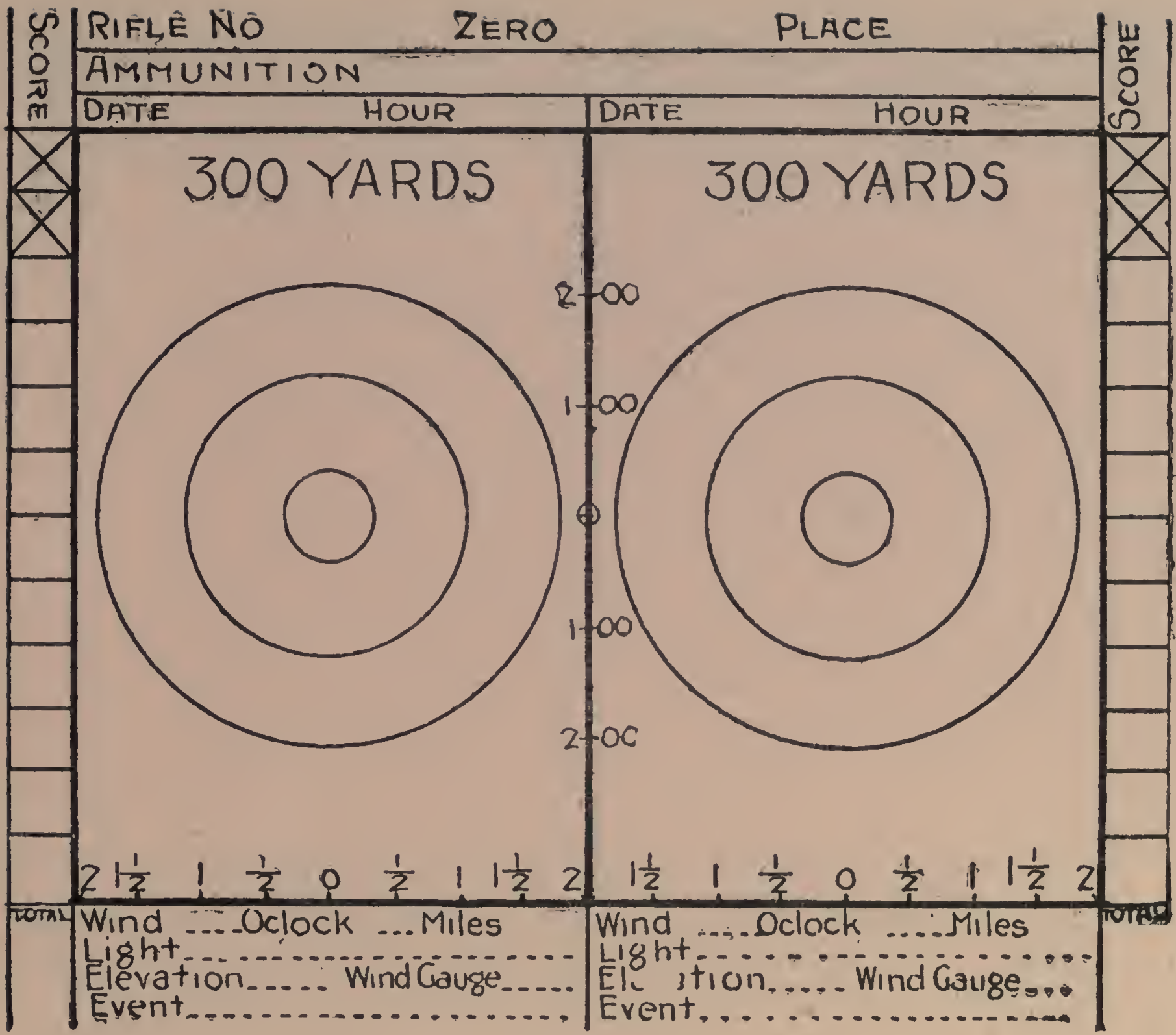
RIFLE NO
ZERO
PLACE
AMMUNITION
DATE
HOUR
DATE
HOUR
SCORE
300 YARDS
300 YARDS
2-00
1-00
1-00
2-00
2 1½ 1 ½ 0 ½ 1 1½ 2
1½ 1 ½ 0 ½ 1 1½ 2
TOTAL
Wind ---Oclock ---Miles
Light
Elevation Wind Gauge
Event
Wind ---Oclock ---Miles
Light
Elevation Wind Gauge
Event
TOTAL


SCORE
RIFLE NO
ZERO
PLACE
AMMUNITION
DATE
HOUR
DATE
HOUR
SCORE
300 YARDS
300 YARDS
2-00
1-00
1-00
2-00
2 1½ 1 ½ 0 ½ 1 1½ 2
1½ 1 ½ 0 ½ 1 1½ 2
TOTAL
Wind ___Oclock ___Miles
Light
Elevation ___ Wind Gauge
Event
Wind ___Oclock ___Miles
Light
Elevation ___ Wind Gauge
Event
TOTALS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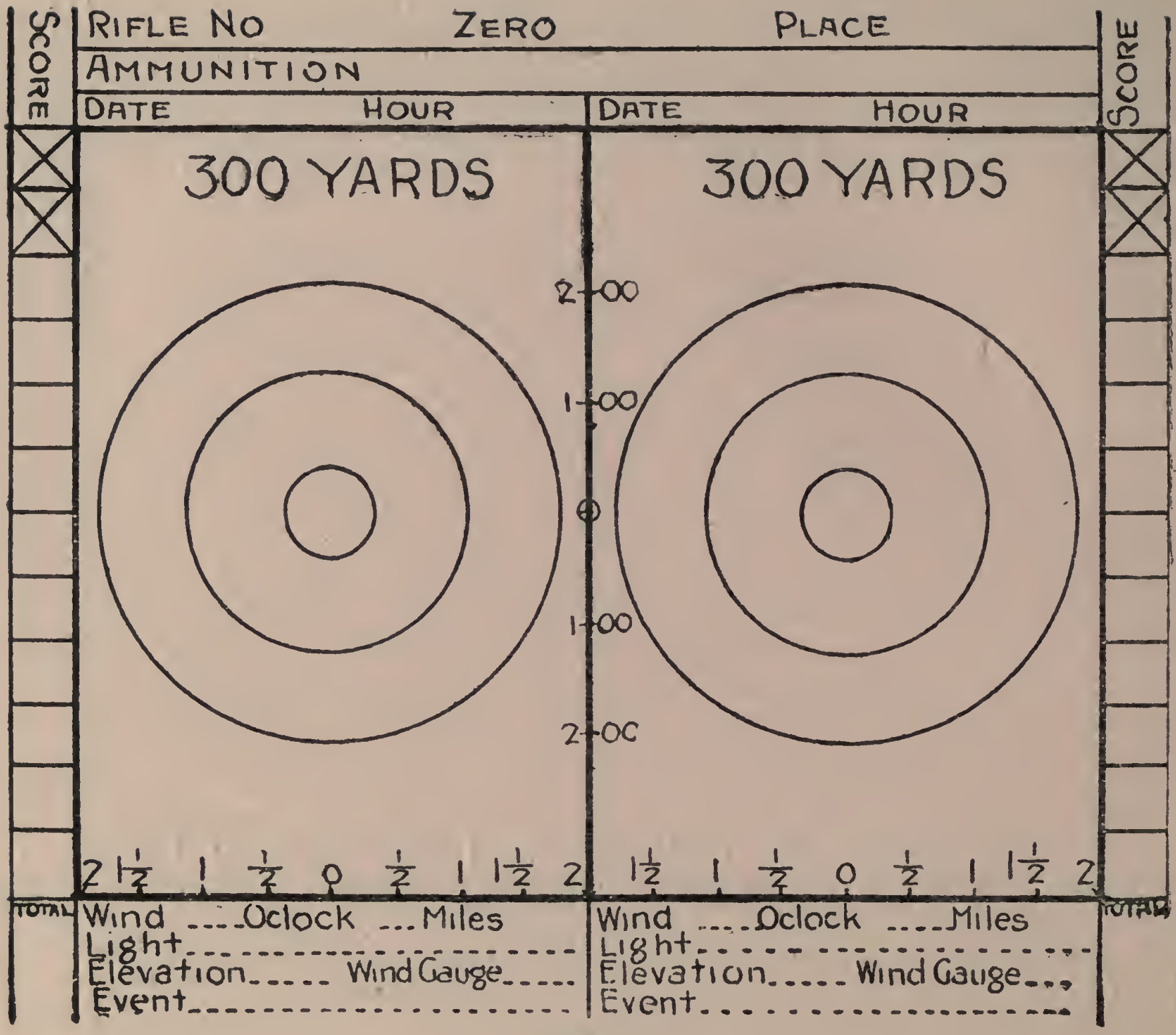
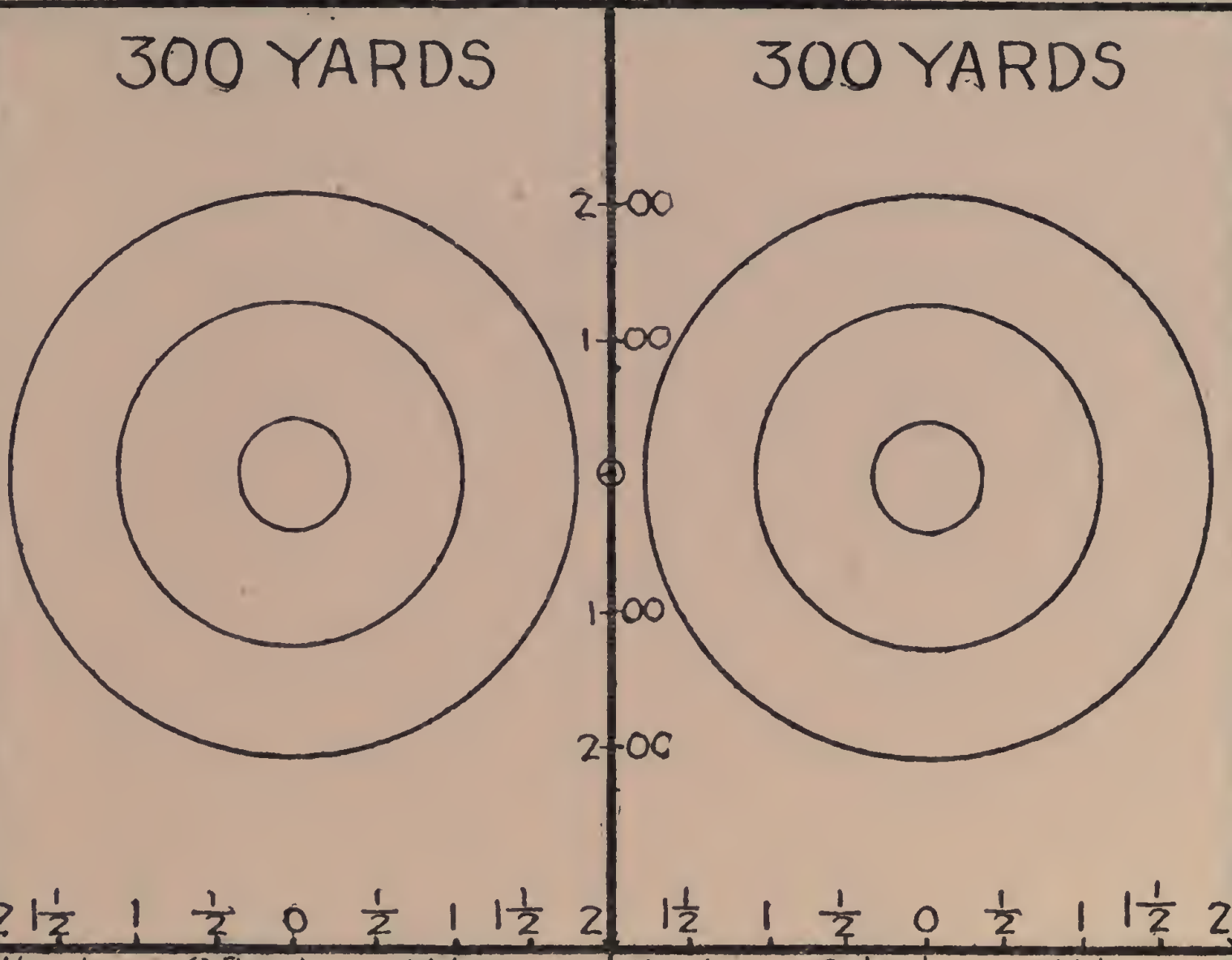
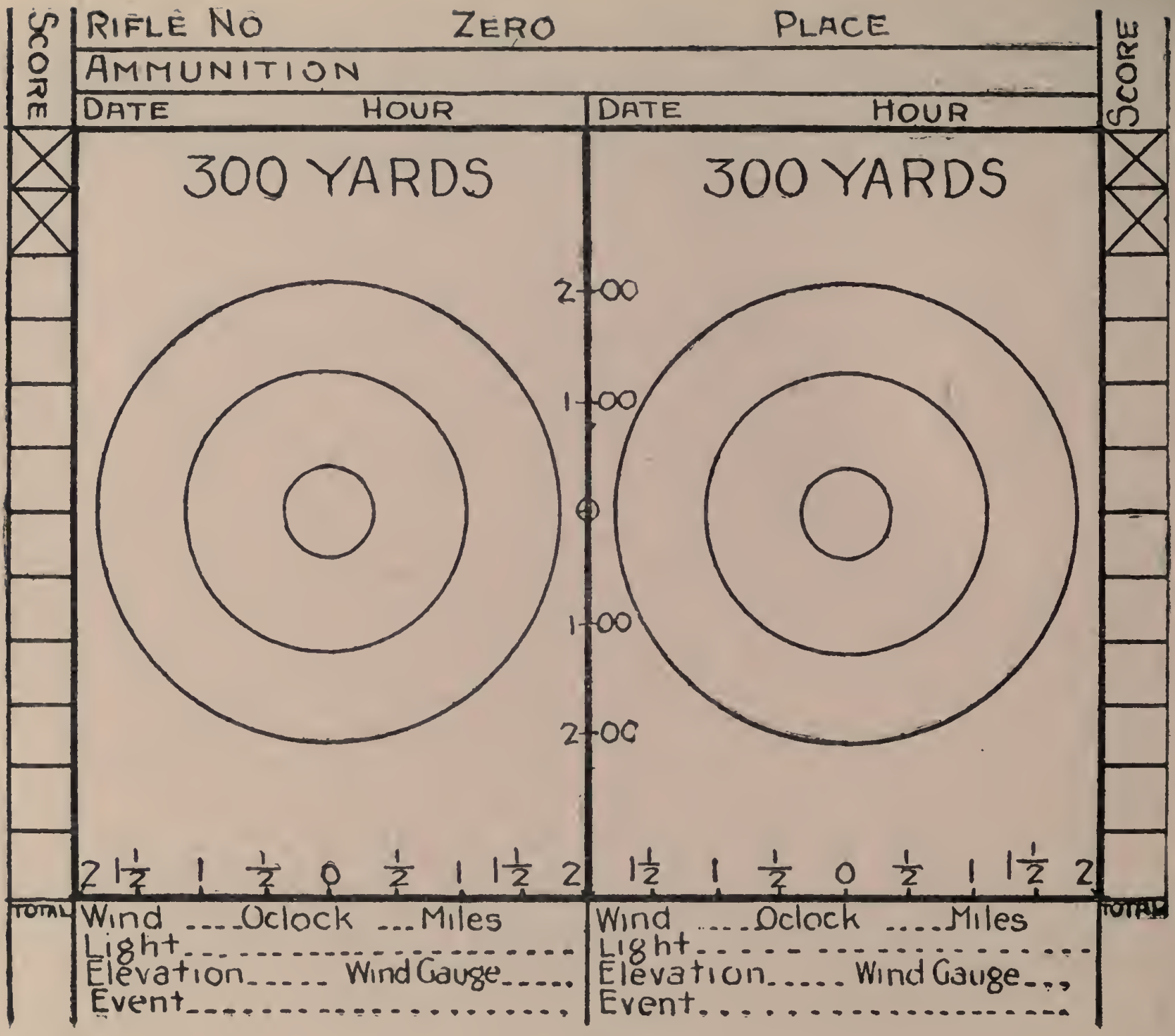
RIFLE NO
ZERO
PLACE
AMMUNITION
DATE
HOUR
DATE
HOUR
SCORE
300 YARDS
300 YARDS
2-00
1-00
1-00
2-00
2 1½ 1 ½ 0 ½ 1 1½ 2
1½ 1 ½ 0 ½ 1 1½ 2
TOTAL
Wind ___Oclock ___Miles
Light
Elevation_____ Wind Gauge_____
Event
Wind ___Oclock ___Miles
Light
Elevation_____ Wind Gauge_____
Event
TOTAL


SCORE
RIFLE NO
ZERO
PLACE
AMMUNITION
DATE
HOUR
DATE
HOUR
SCORE
300 YARDS
300 YARDS
2-00
1-00
0
1-00
2-00
2 1½ 1 ½ 0 ½ 1 1½ 2
1½ 1 ½ 0 ½ 1 1½ 2
TOTAL
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge____
Event
Wind ___Oclock ___Miles
Light
Elevation____ Wind Gauge___
Event
TOTAL

SCORE	RIFLE NO	ZERO	PLACE	SCORE
	AMMUNITION			
	DATE HOUR		DATE HOUR	

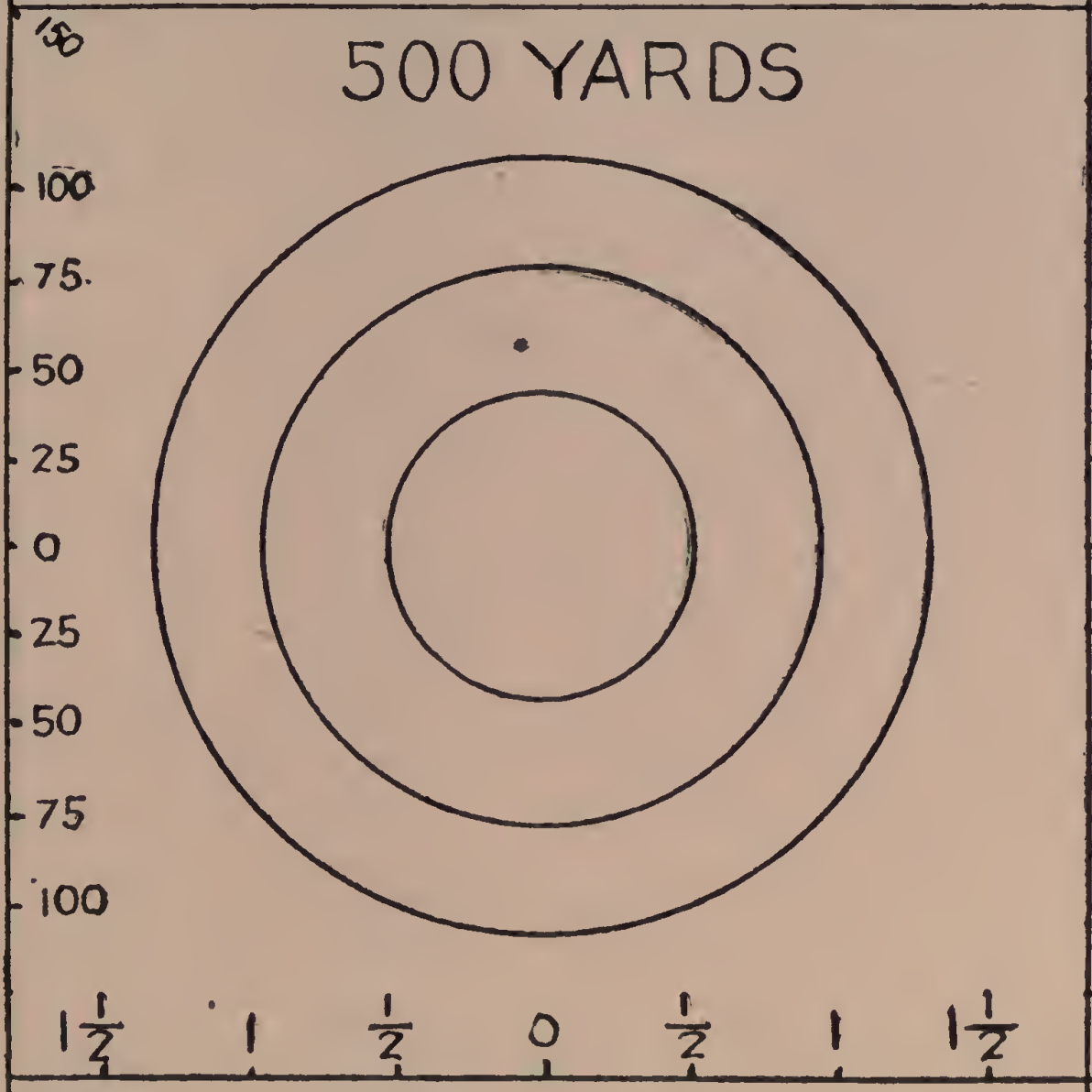


TOTAL		TOTAL
	Wind ....Oclock ...Miles Light..... Elevation..... Wind Gauge..... Event.....	Wind ....Oclock ....Miles Light..... Elevation..... Wind Gauge... Event.....


SCORE
RIFLE NO
ZERO
PLACE
AMMUNITION
DATE
HOUR
DATE
HOUR
SCORE
300 YARDS
300 YARDS
2-00
1-00
0
1-00
2-00
2 1½ 1 ½ 0 ½ 1 1½ 2
1½ 1 ½ 0 ½ 1 1½ 2
TOTAL
Wind ___Oclock ___Miles
Light_____
Elevation_____ Wind Gauge_____
Event_____
Wind ___Oclock ___Miles
Light_____
Elevation_____ Wind Gauge_____
Event_____
TOTAL

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....

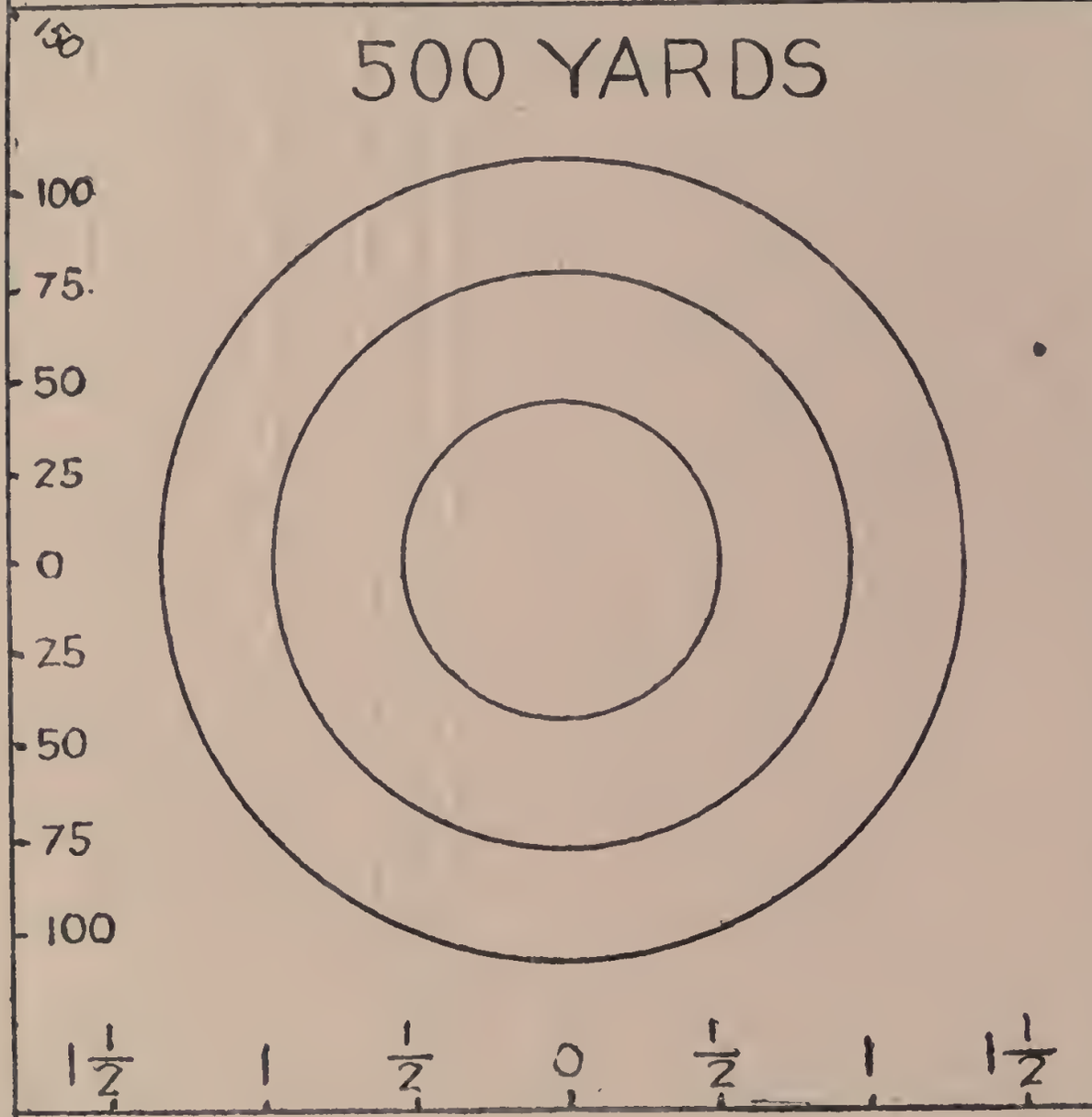


No	Elev	W.G.	Pull	Value
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND ____ ---OCLOCK --MILES MIRAGE.....
LIGHT.....

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....

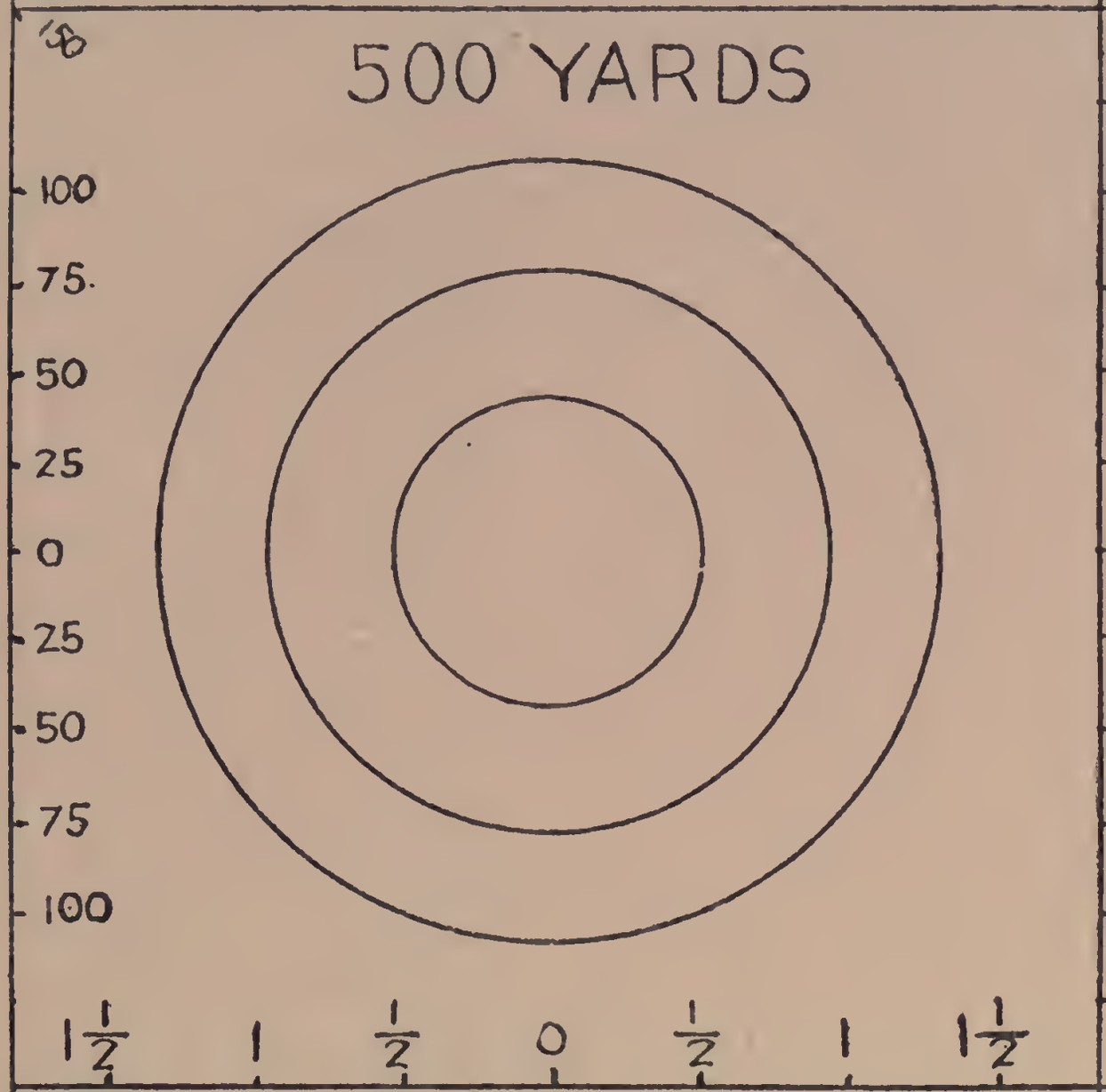


No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND ____ ---OCLOCK ---MILES MIRAGE.....
LIGHT.....

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....

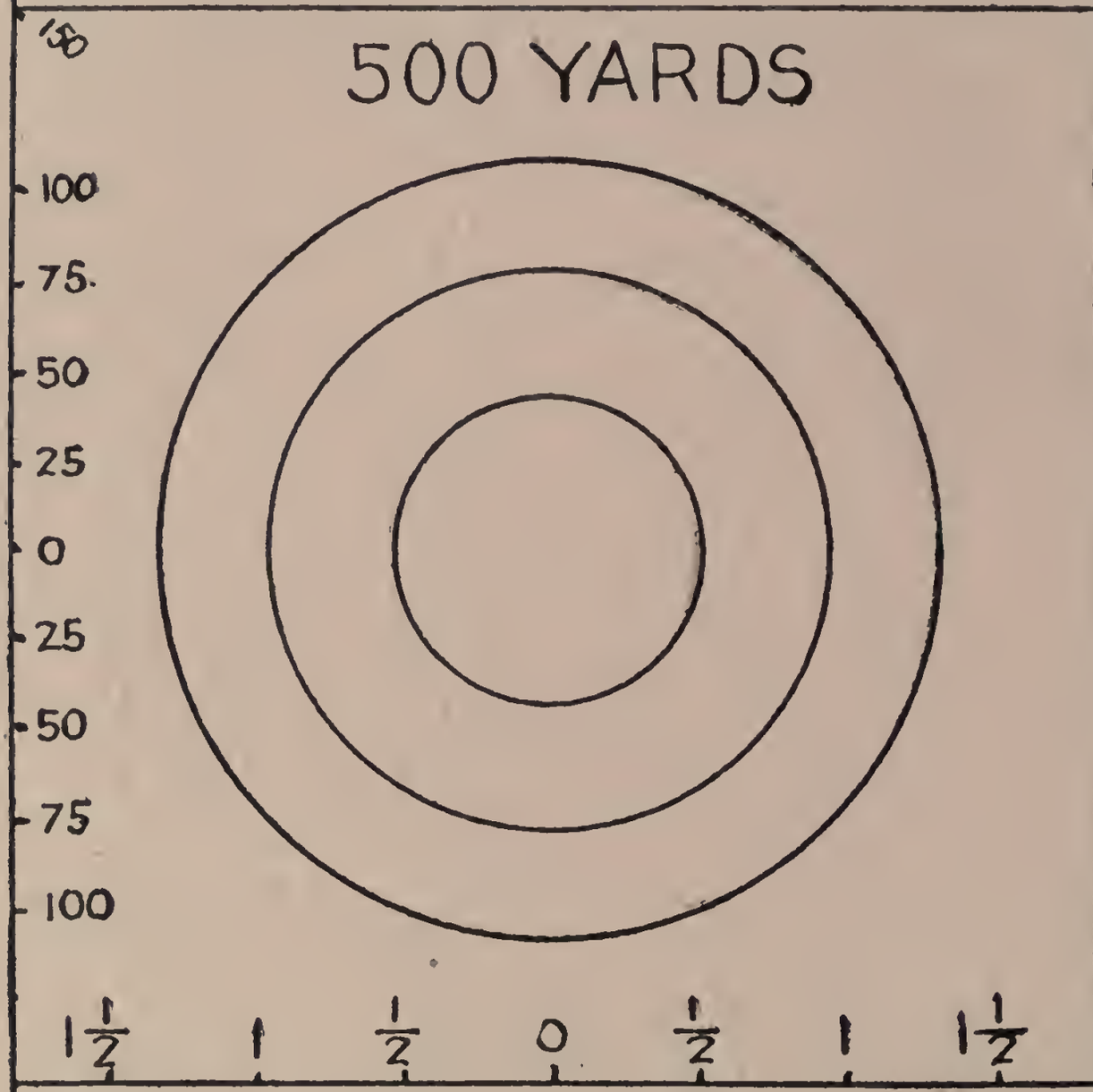


No	Elev	W.G.	Pull	Value
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND ____ ---OCLOCK --MILES MIRAGE .....
LIGHT .....

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....

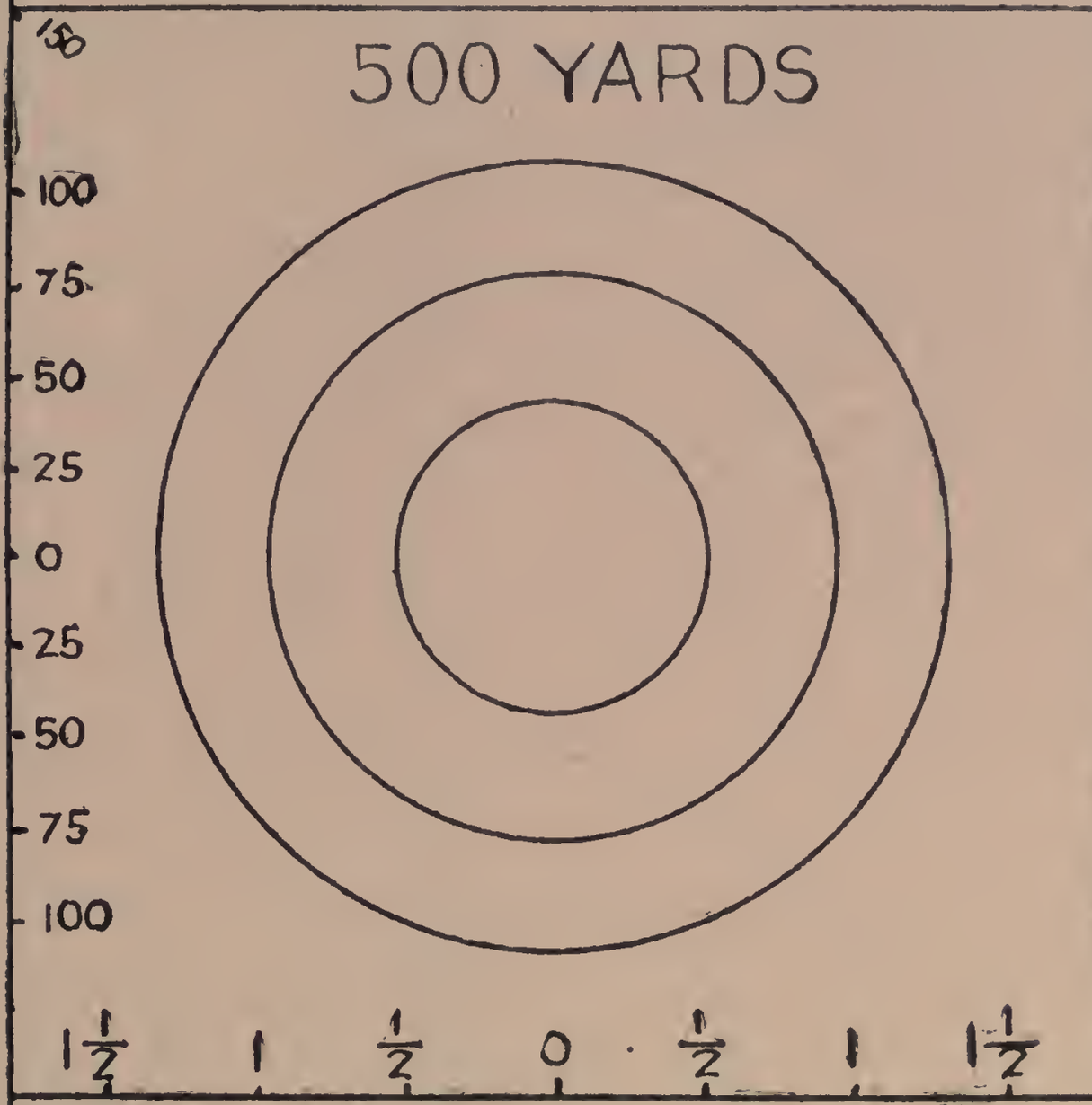


No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND ____ ---OCLOCK --MILES MIRAGE.....
LIGHT.....

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....

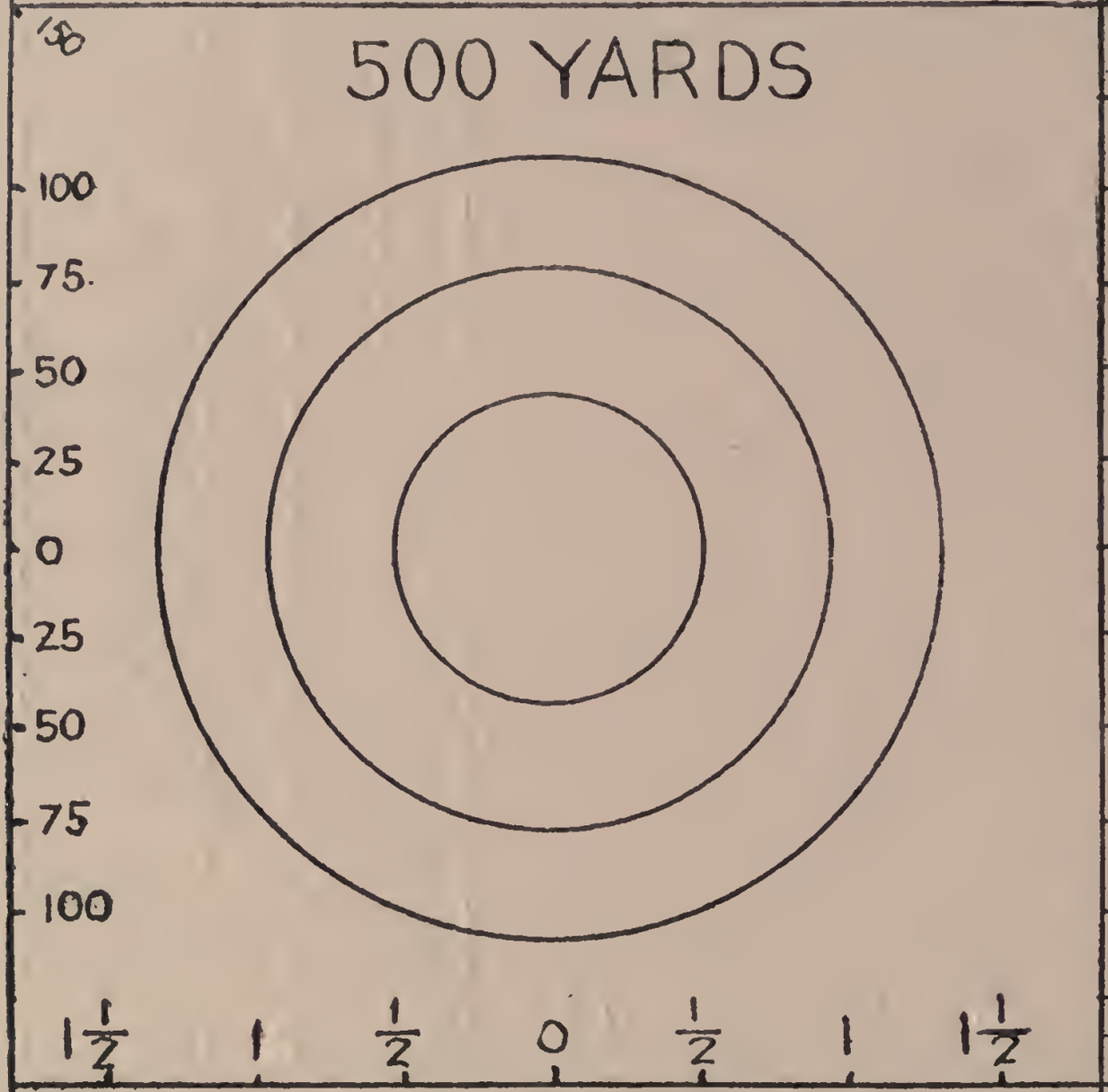


No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND ___ ---OCLOCK --MILES MIRAGE .....
LIGHT .....

RIFLE NO..... ZERO.....
PLACE..... DATE..... HOUR.....
AMMUNITION.....

EVENT.....



No	Elev.	W.G.	Pull	Value
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

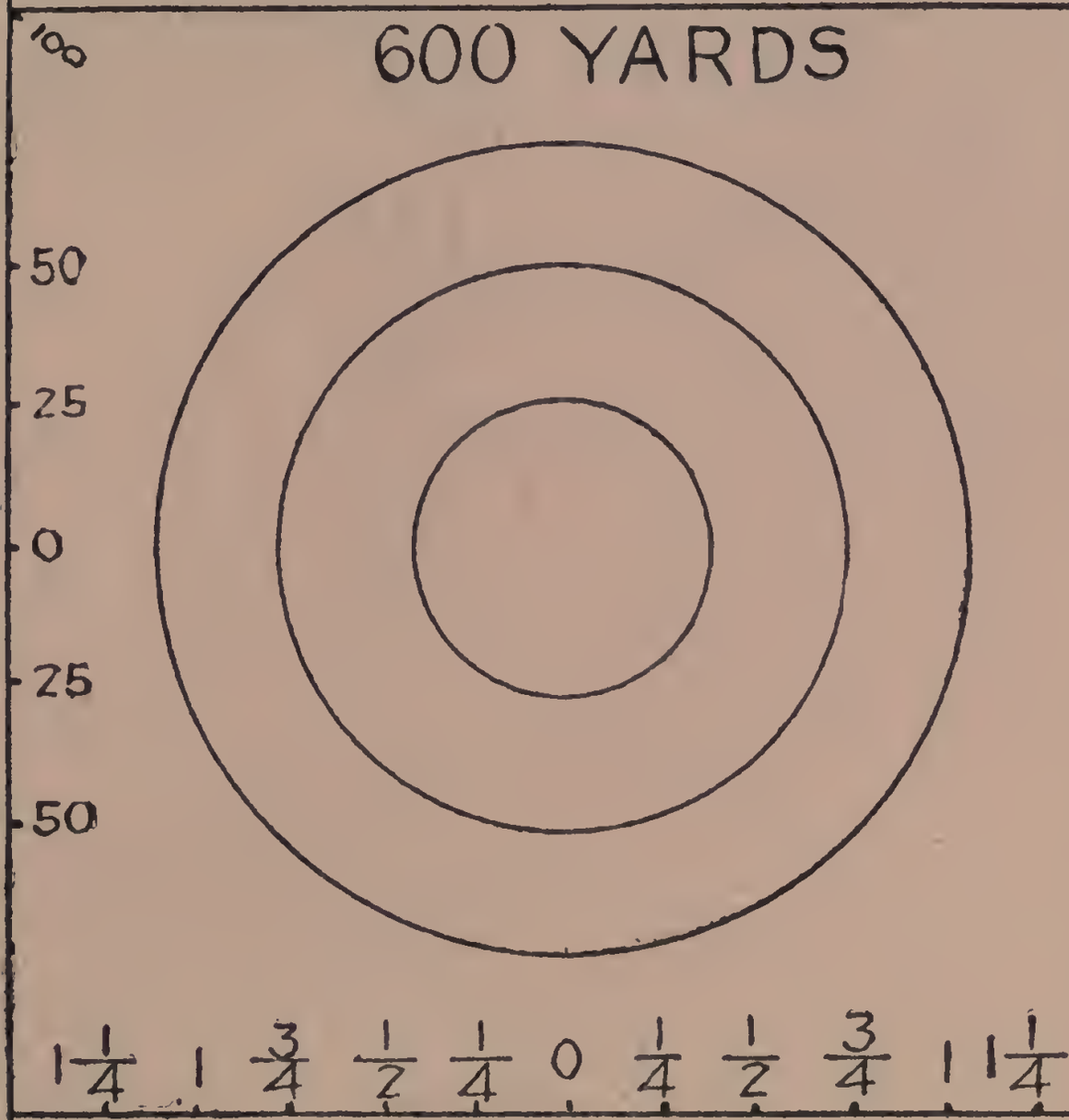
WIND ←...OCLOCK ...MILES MIRAGE.....
LIGHT.....

RIFLE NO_____ ZERO_____

PLACE_____ DATE_____ HOUR_____

AMMUNITION_____

EVENT_____



No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND_____ ___OCLOCK___MILES MIRAGE_____

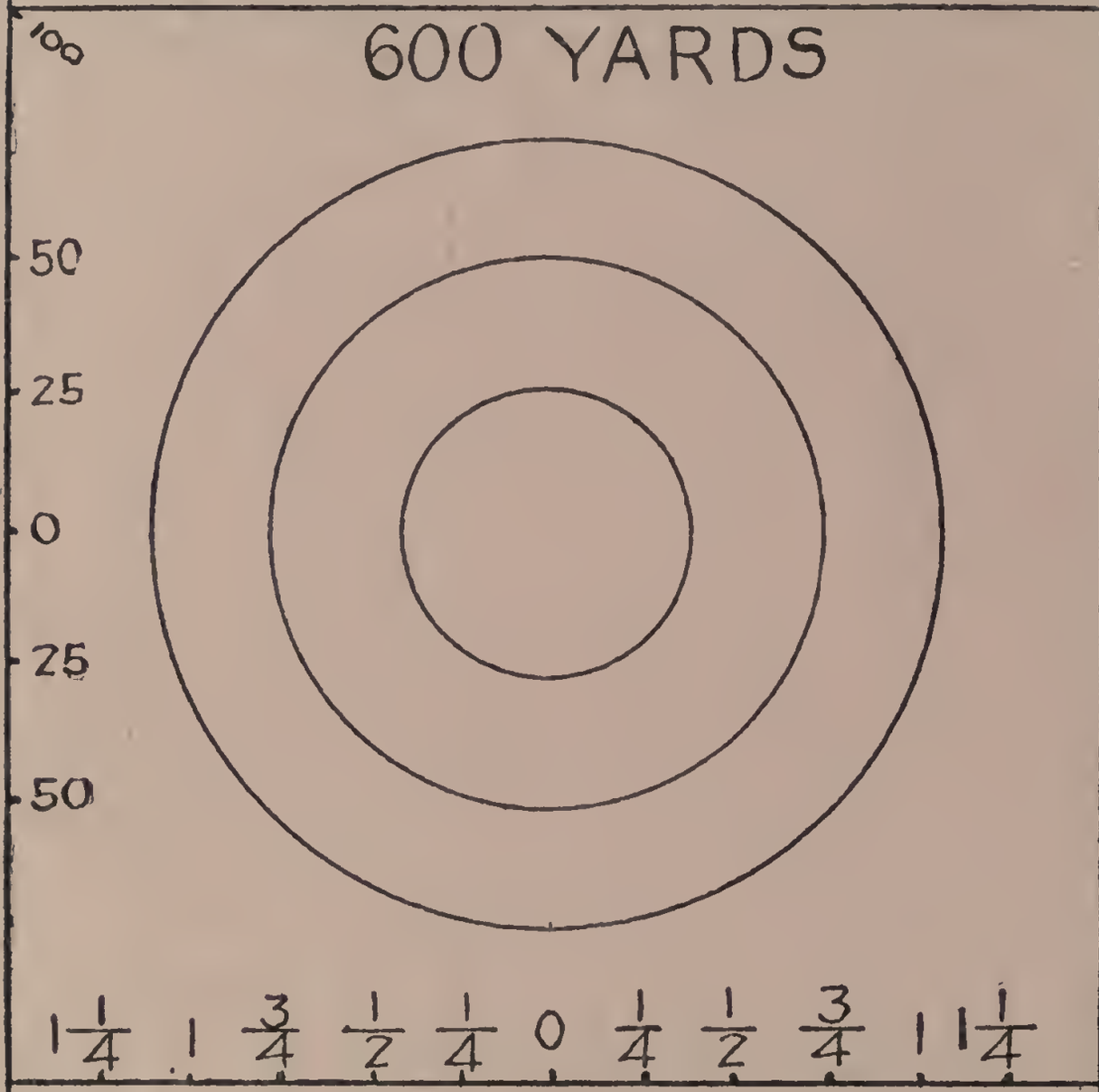
LIGHT_____

RIFLE NO_____ ZERO_____

PLACE_____ DATE_____ HOUR_____

AMMUNITION_____

EVENT_____



No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND

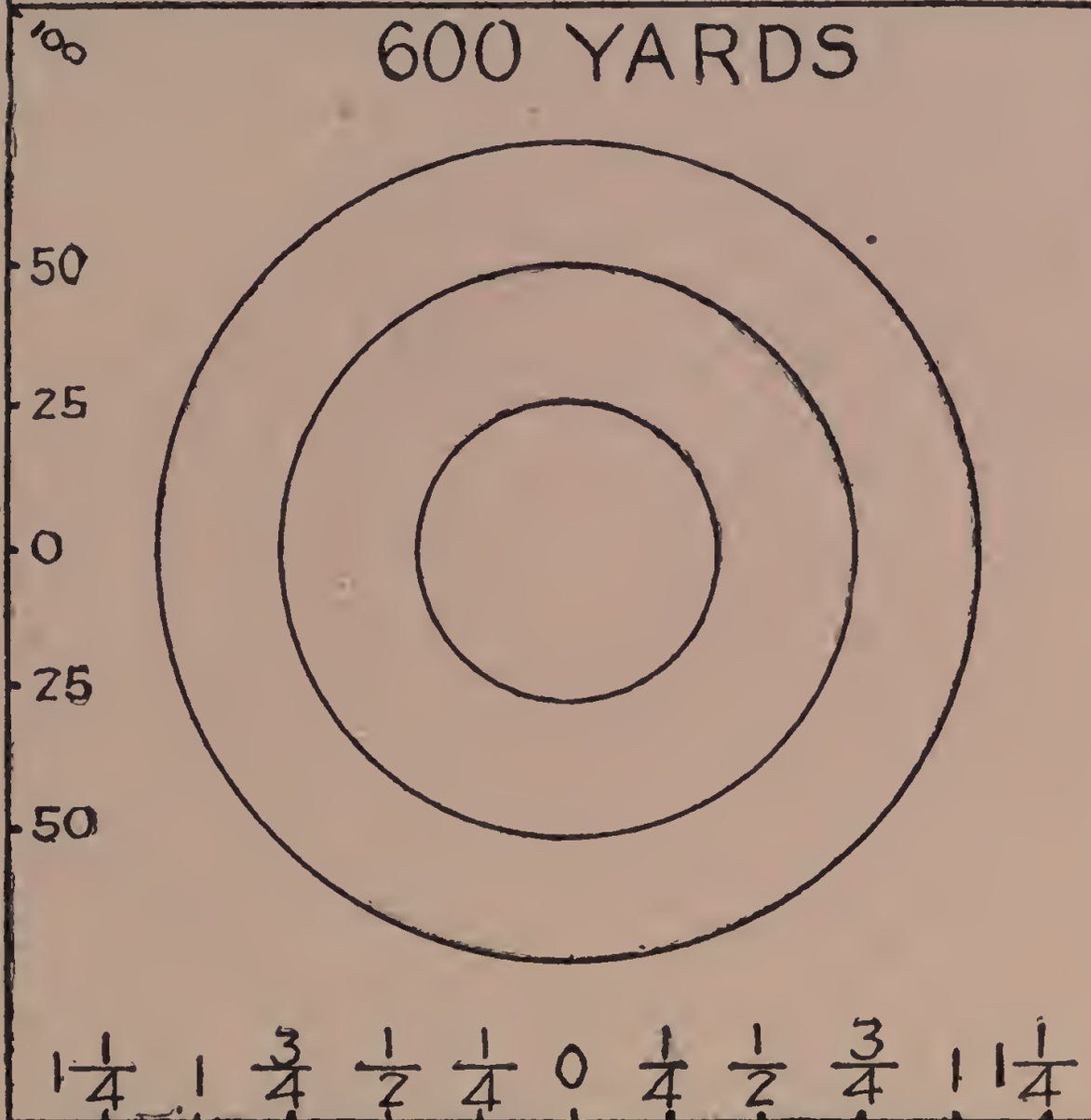
LIGHT

____O'CLOCK ___MILES MIRAGE____

RIFLE NO_____ ZERO_____
PLACE_____ DATE_____ HOUR_____
AMMUNITION_____

EVENT_____

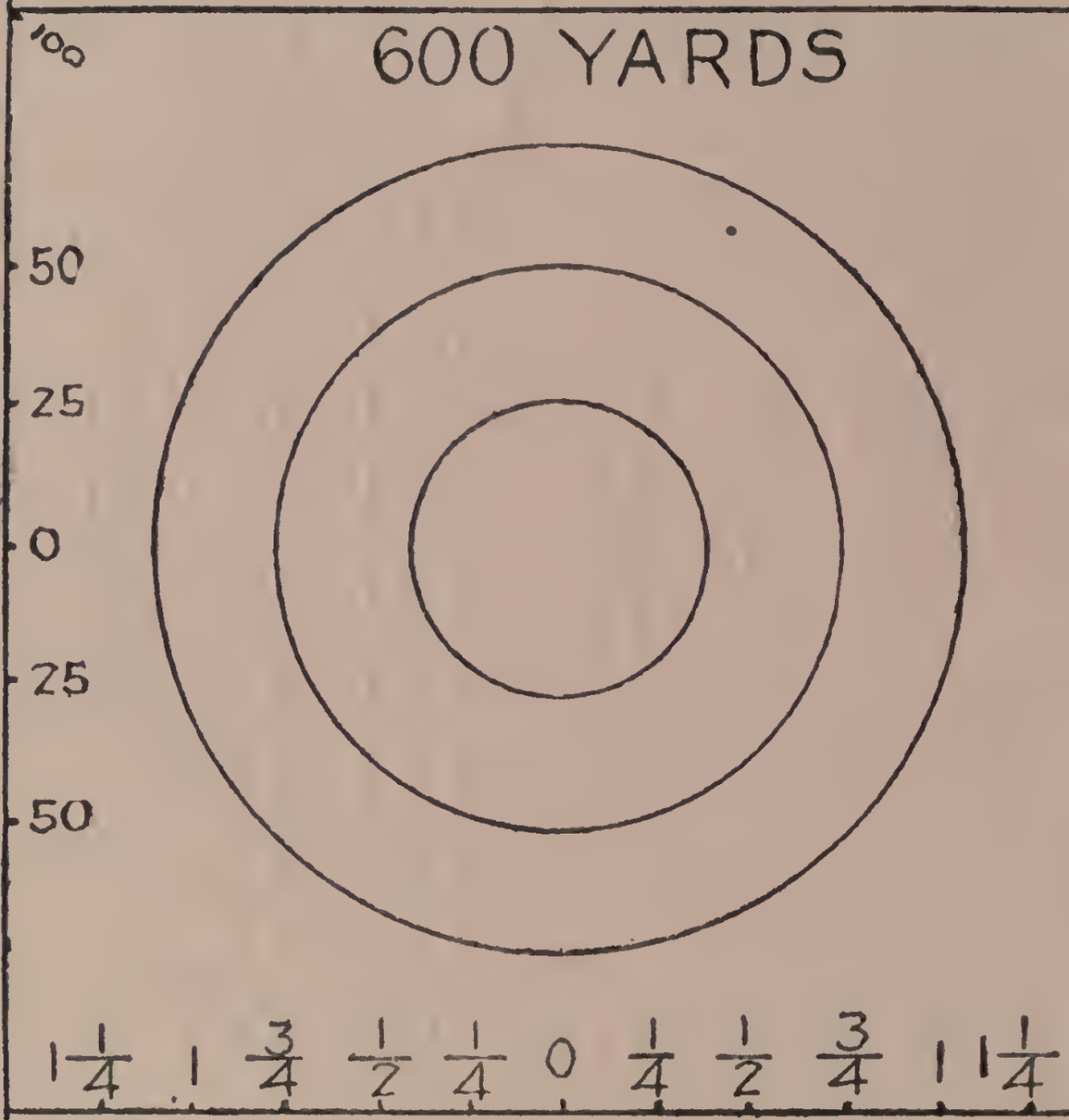
No	Elev	W.G.	Pull	VALUE
S			○	X
S			○	X
1			○	
2			○	
3			○	
4			○	
5			○	
6			○	
7			○	
8			○	
9			○	
10			○	
TOTAL SCORE				



WIND_____ ___OCLOCK ___MILES MIRAGE_____
LIGHT_____

RIFLE NO_____ ZERO_____
PLACE_____ DATE_____ HOUR_____
AMMUNITION_____

EVENT_____



No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

WIND_____ ___OCLOCK ___MILES MIRAGE_____
LIGHT_____

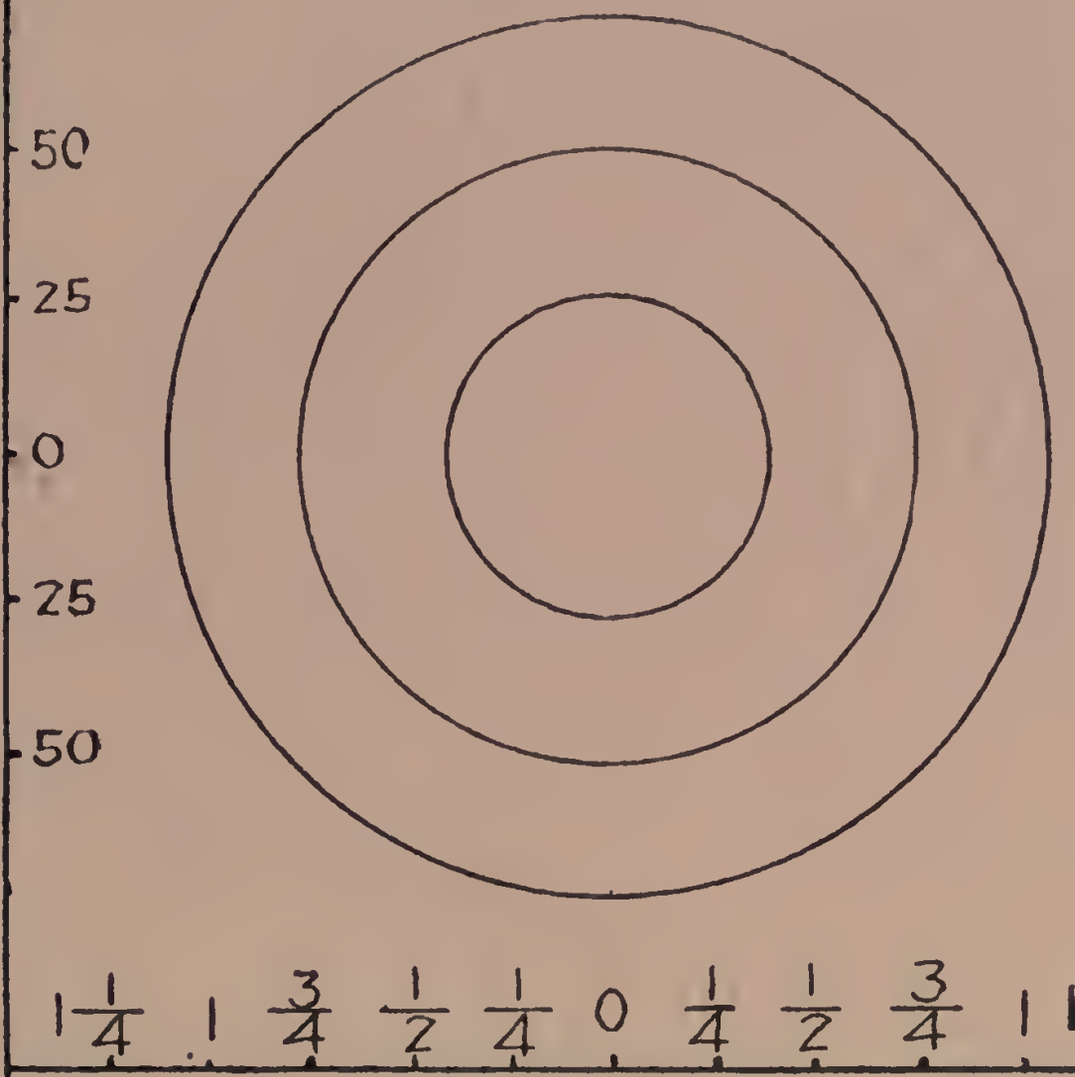
RIFLE NO_____ ZERO_____

PLACE_____ DATE_____ HOUR_____

AMMUNITION_____

EVENT_____

600 YARDS



No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				

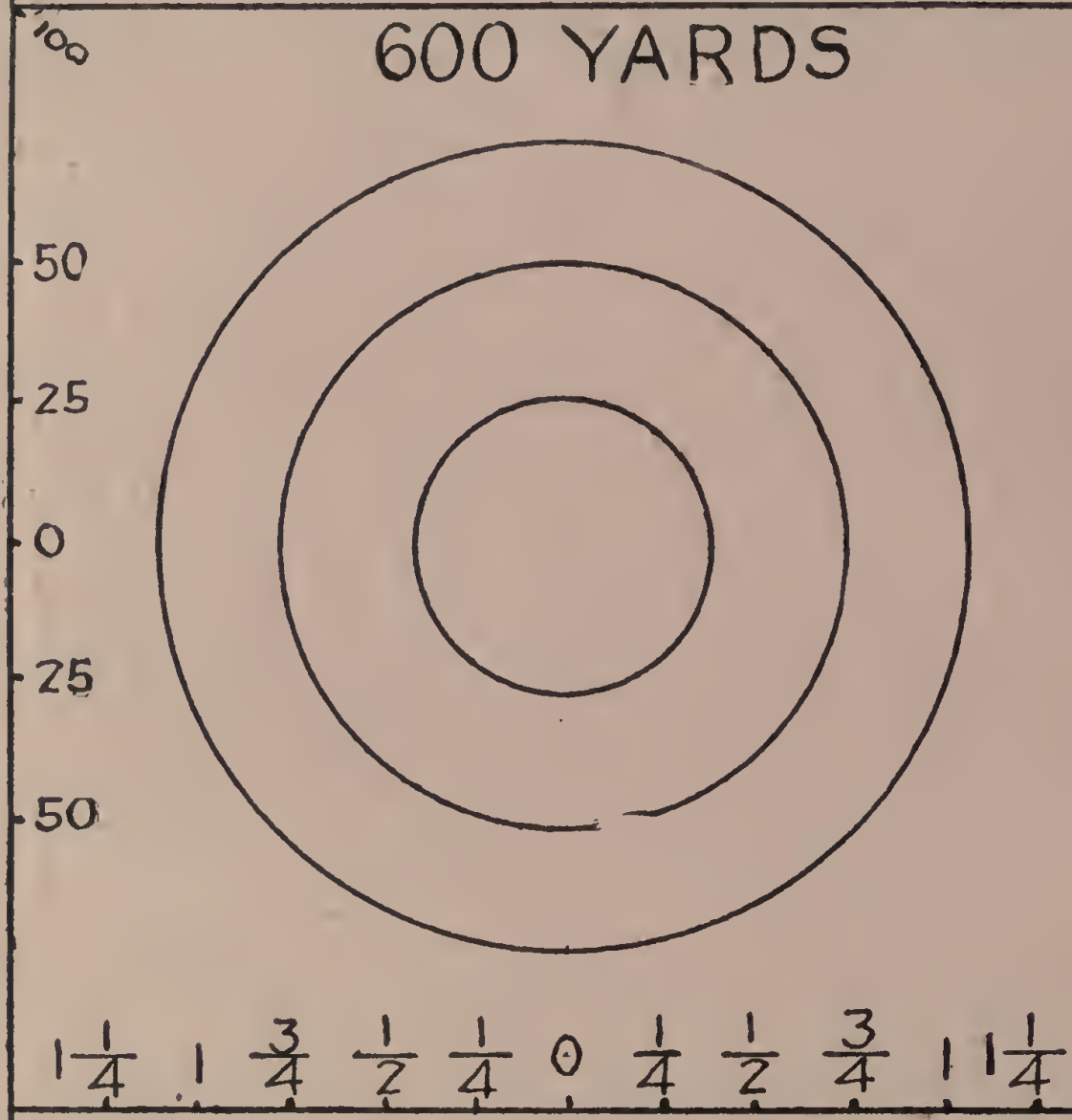
WIND_____ ____OCLOCK ___MILES MIRAGE ____

LIGHT_____

RIFLE NO_____ ZERO_____
PLACE_____ DATE_____ HOUR_____
AMMUNITION_____

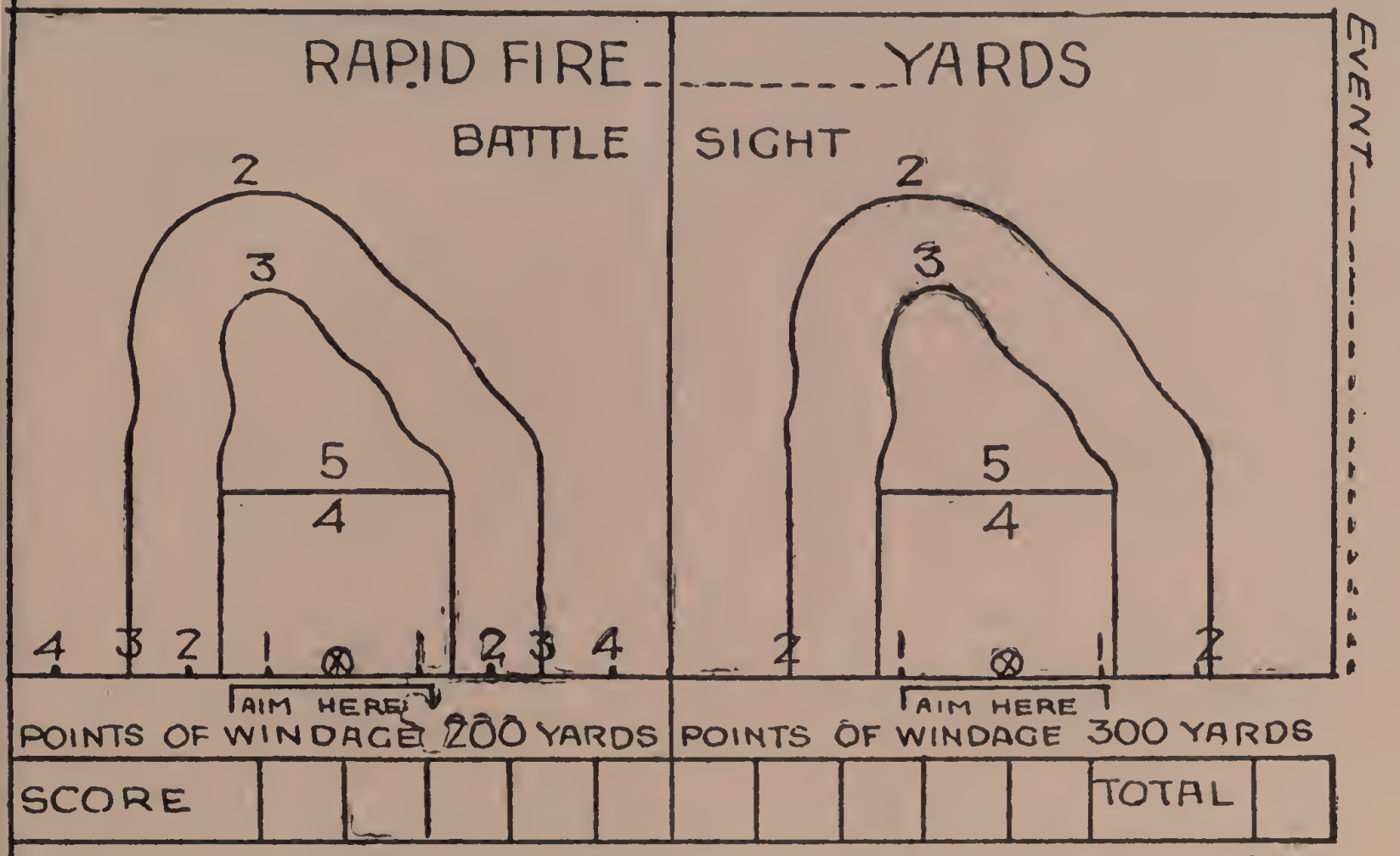
EVENT_____

No	Elev	W.G.	Pull	VALUE
S			O	X
S			O	X
1			O	
2			O	
3			O	
4			O	
5			O	
6			O	
7			O	
8			O	
9			O	
10			O	
TOTAL SCORE				



WIND_____ ___OCLOCK ___MILES MIRAGE_____
LIGHT_____

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____OCLOCK ____MILES W.G_____ LIGHT____



POINTS OF WINDAGE 200 YARDS | POINTS OF WINDAGE 300 YARDS

SCORE | TOTAL

USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
BY SIGHTING IN PRONE YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
TIME LIMIT 200 & 300 MARKSMANS COURSE 20 SECS—500 YDS SS. COURSE 30 SECS.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

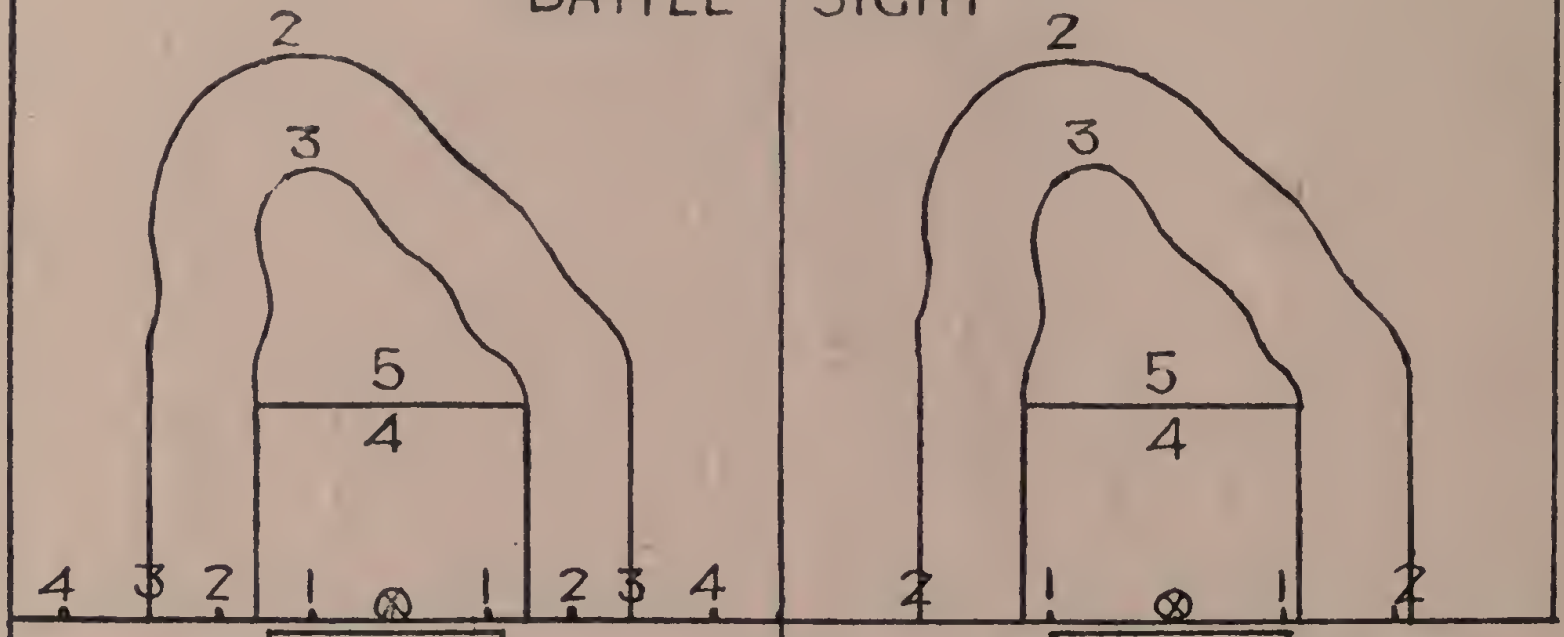
Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____OCLOCK ____MILES W.G_____ LIGHT____

EVENT_____

RAPID FIRE _____ YARDS

BATTLE SIGHT



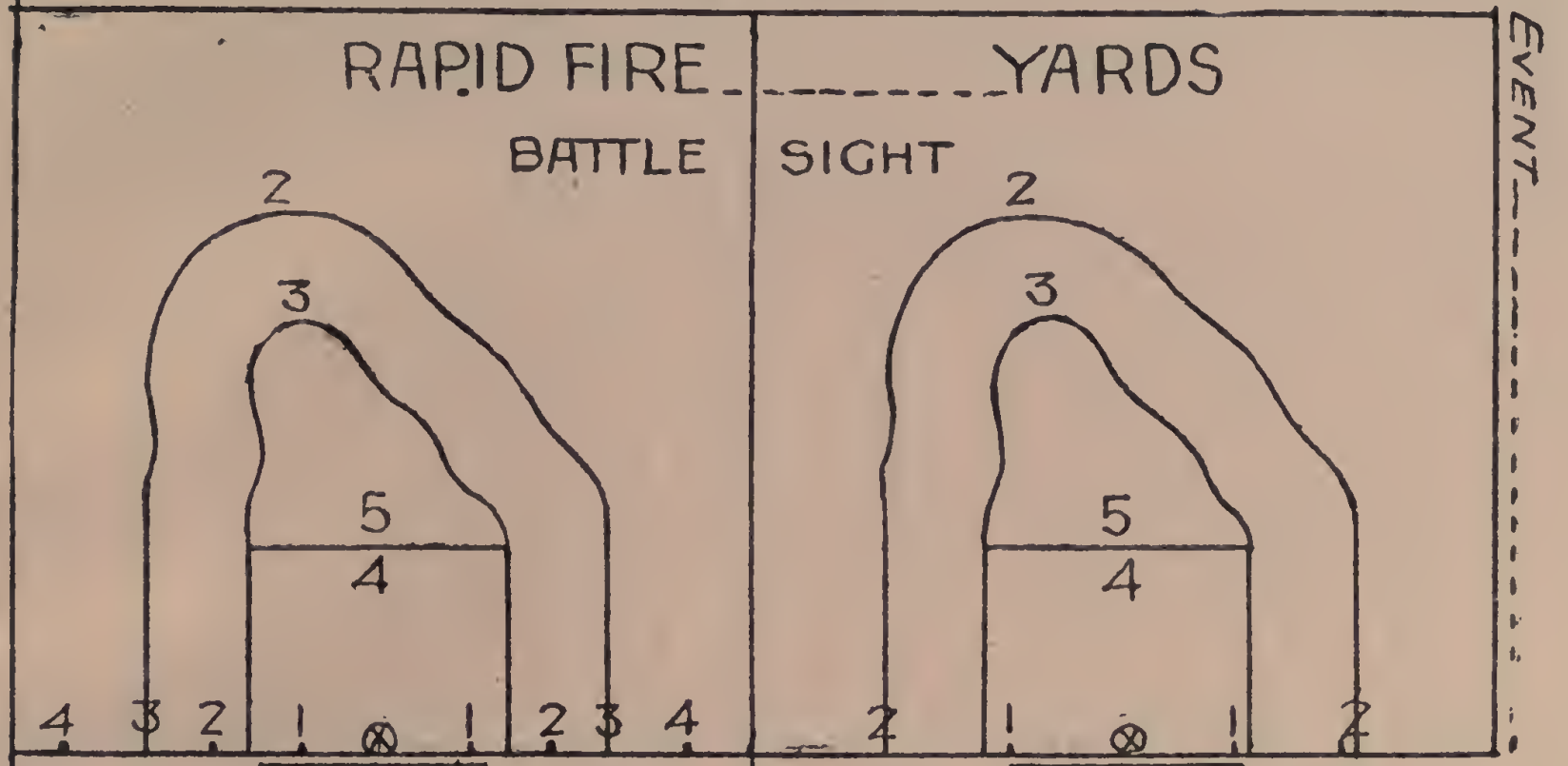
POINTS OF WINDAGE 200 YARDS

POINTS OF WINDAGE 300 YARDS

SCORE											TOTAL	

USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
BY SIGHTING IN PRONE YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
TIME LIMIT 200 & 300 MARKSMANS COURSE 20 SECS—500 YDS SS. COURSE 30 SECS.

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____OCLOCK ____MILES W.C._____ LIGHT_____



POINTS OF WINDAGE 200 YARDS | POINTS OF WINDAGE 300 YARDS

SCORE												TOTAL	

USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
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HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
TIME LIMIT 200 & 300 MARKSMANS COURSE 20 SECS—500 YDS SS. COURSE 30 SECS

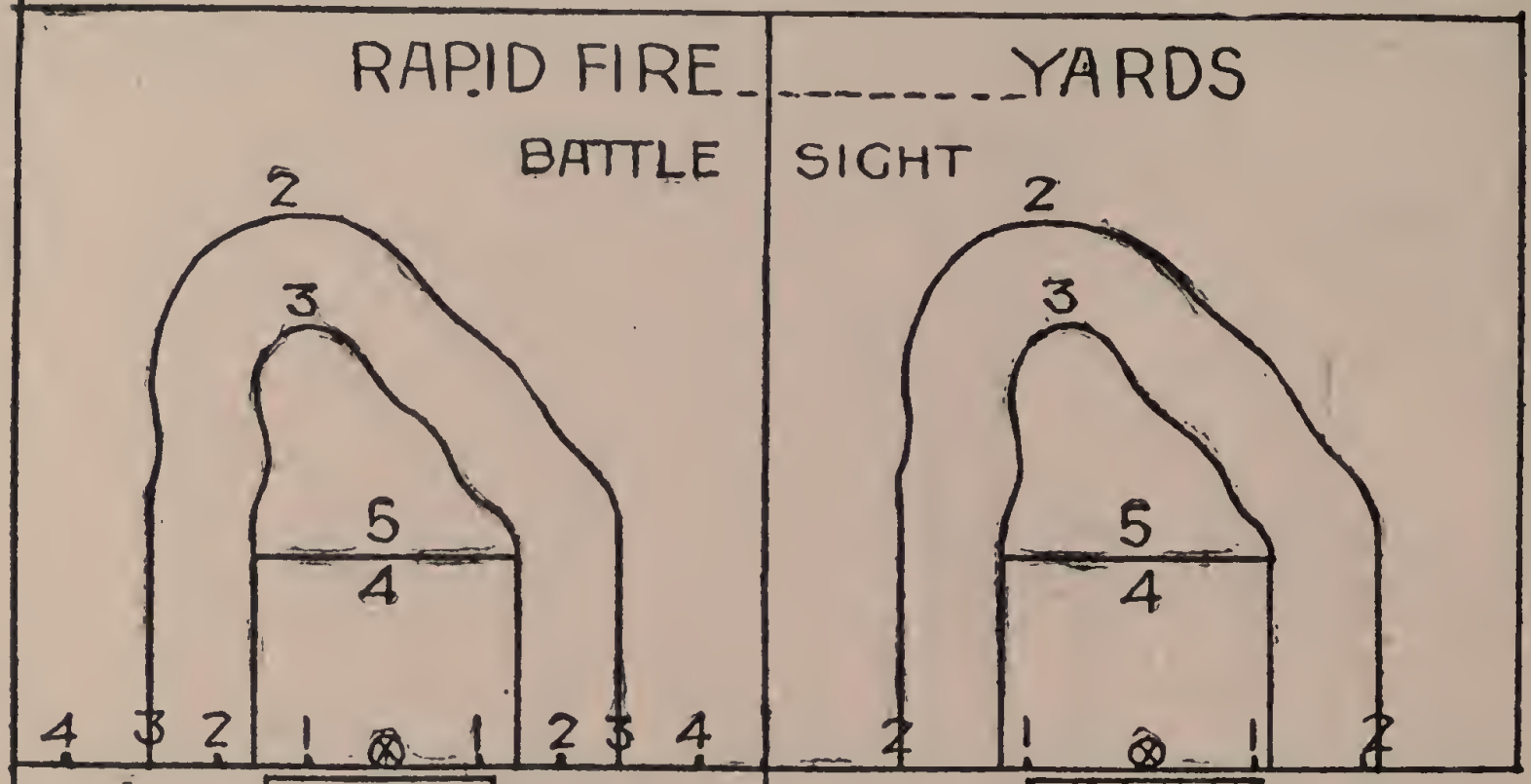
Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

RIFLE NO..... ZERO..... PLACE.....
AMMUNITION..... DATE..... HOUR.....
WIND ....OCLOCK ....MILES W.G..... LIGHT....

EVENT.....

RAPID FIRE.....YARDS

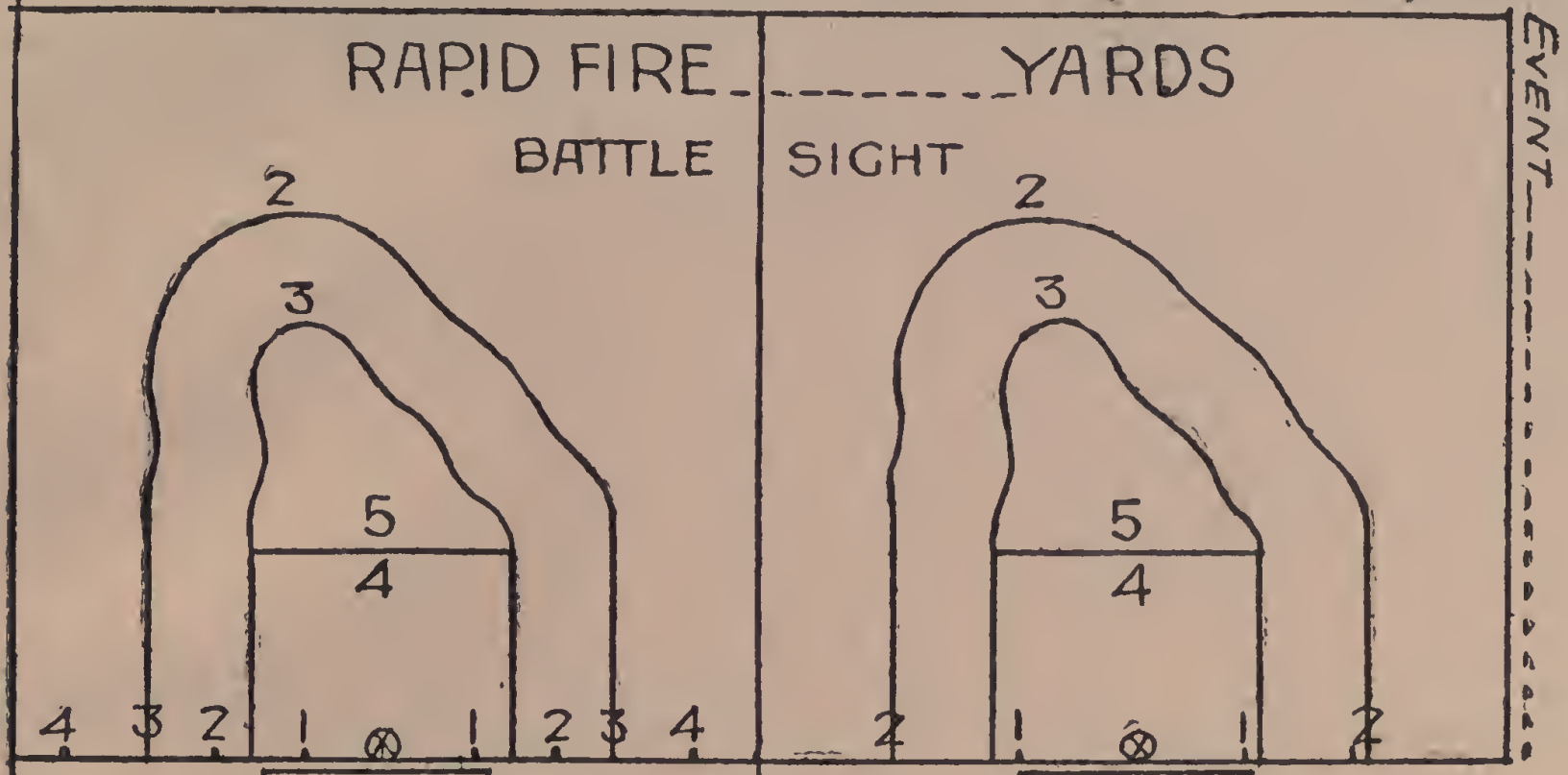


POINTS OF WINDAGE 200 YARDS POINTS OF WINDAGE 300 YARDS

SCORE TOTAL

USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
BY SIGHTING IN PRONE YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
TIME LIMIT 200 & 300 MARKSMANS COURSE 20 SECS—500 YDS SS. COURSE 30 SECS

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____OCLOCK _____MILES W.C._____ LIGHT_____



USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
BY SIGHTING IN PRONE, YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
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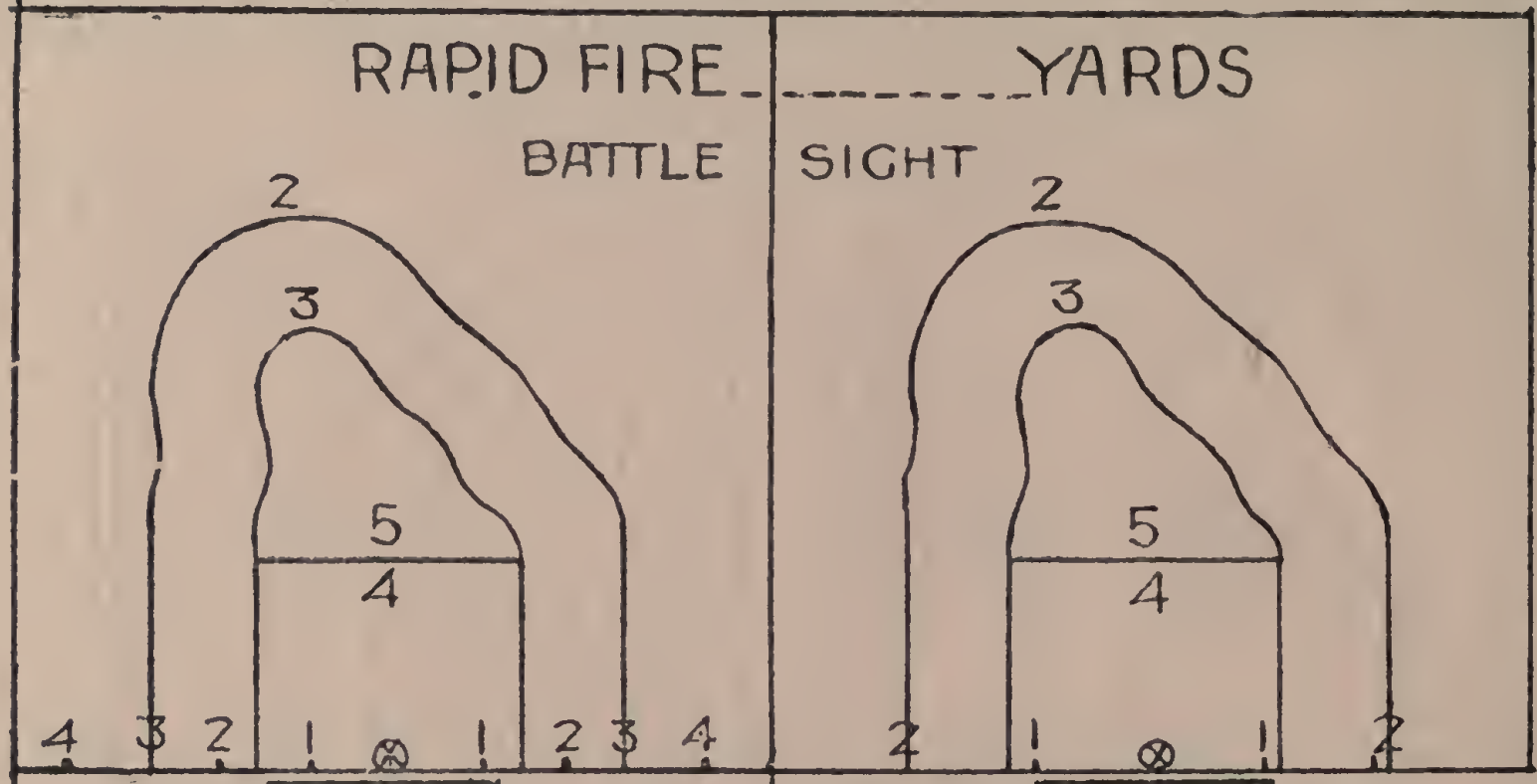
RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____OCLOCK _____MILES W.C._____ LIGHT_____

EVENT_____



POINTS OF WINDAGE 200 YARDS | POINTS OF WINDAGE 300 YARDS

SCORE | | | | | | | | | | | TOTAL | |

USE BAYONET AT 200 YDS—KNEEL AT APPEARANCE OF TARGET
YOU ARE ALLOWED TO USE WINDAGE WITH BATTLE SIGHT
THE POINT OF AIM INDICATED IS CORRECT FOR AVERAGE RIFLE
BY SIGHTING IN PRONE YOU CAN FIND WHERE TO AIM TO
HIT ABOUT WHERE THE FIGURE 4 IS SHOWN ABOVE
300 YDS WITHOUT BAYONET—POSITION SITTING OR KNEELING
TRY TO GET THE FIRST SHOT OFF GOOD—TAKE TIME TO GET A GOOD POSITION
TIME LIMIT 200 & 300 MARKSMANS COURSE 20 SECS—500 YDS SS. COURSE 30 SECS

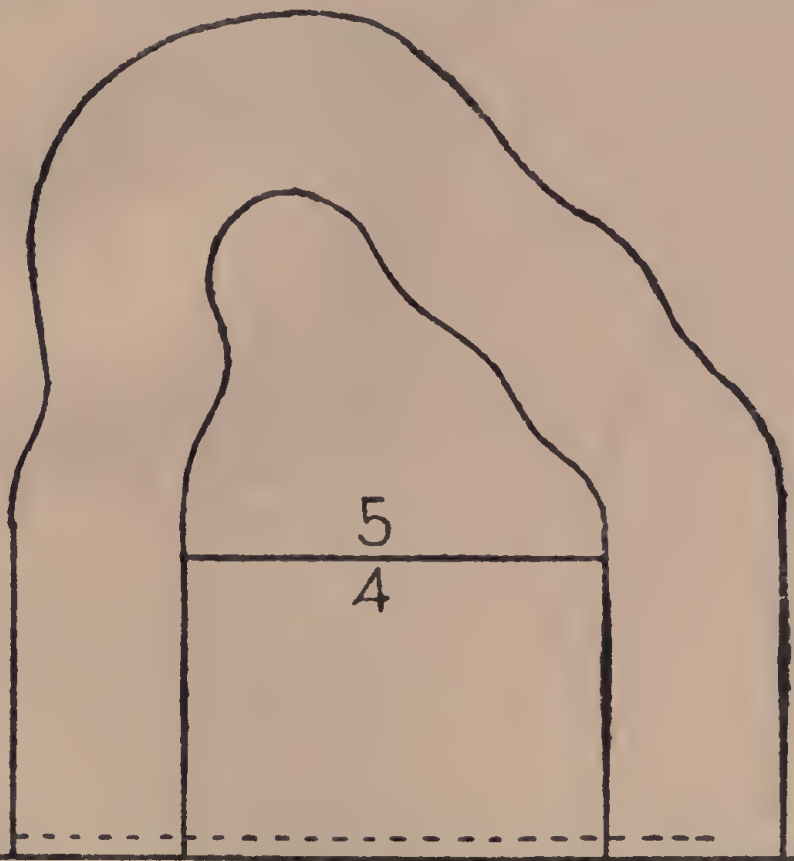
RIFLE NO_____ ZERO_____ PLACE _____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK ____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION.
USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

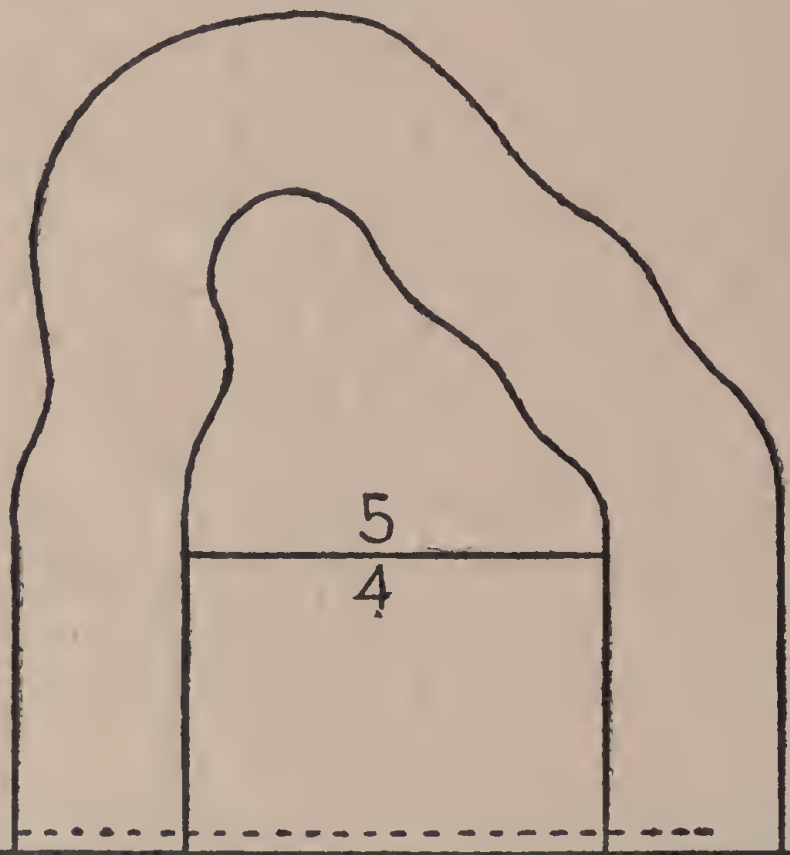
RIFLE NO_____ ZERO_____ PLACE _____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

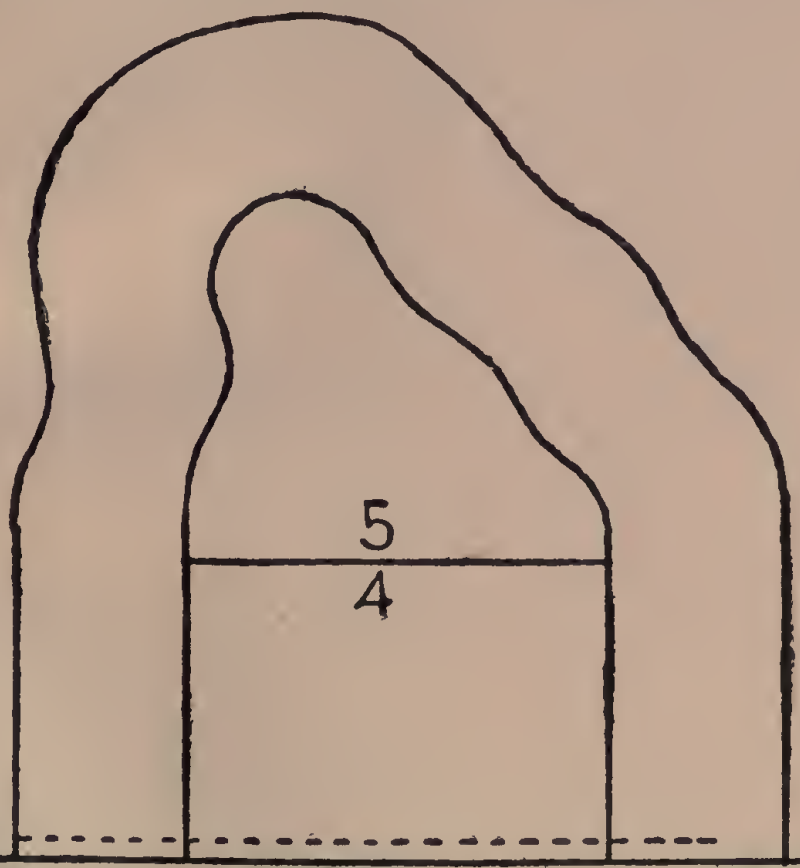
RIFLE NO_____ ZERO_____ PLACE _____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION.
USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

Have bolt in smooth working order. Work it back and forth rapidly a few times **before loading.**

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

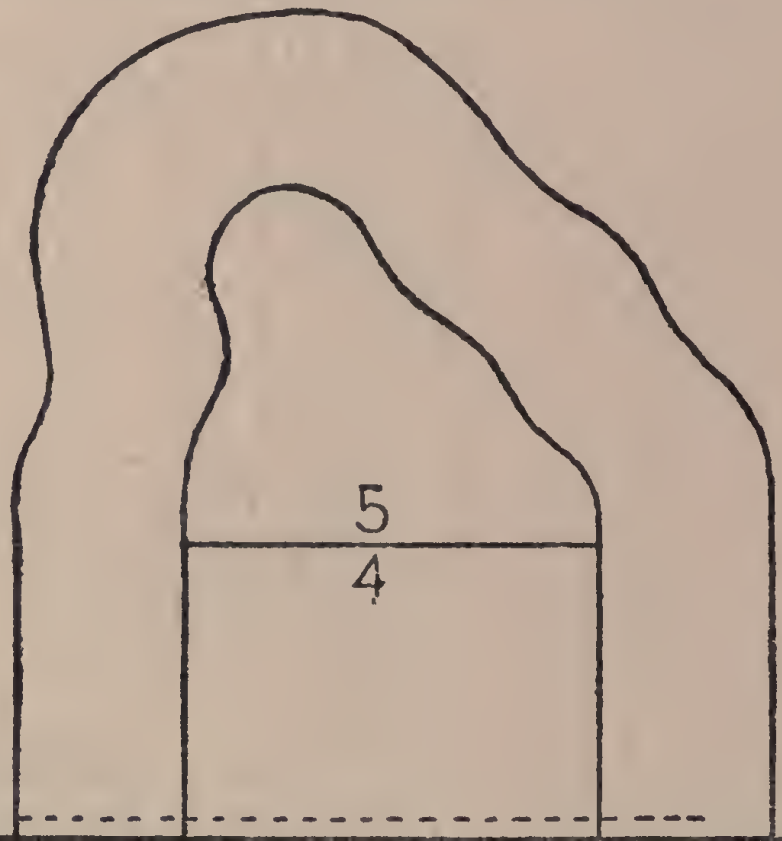
RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES– AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

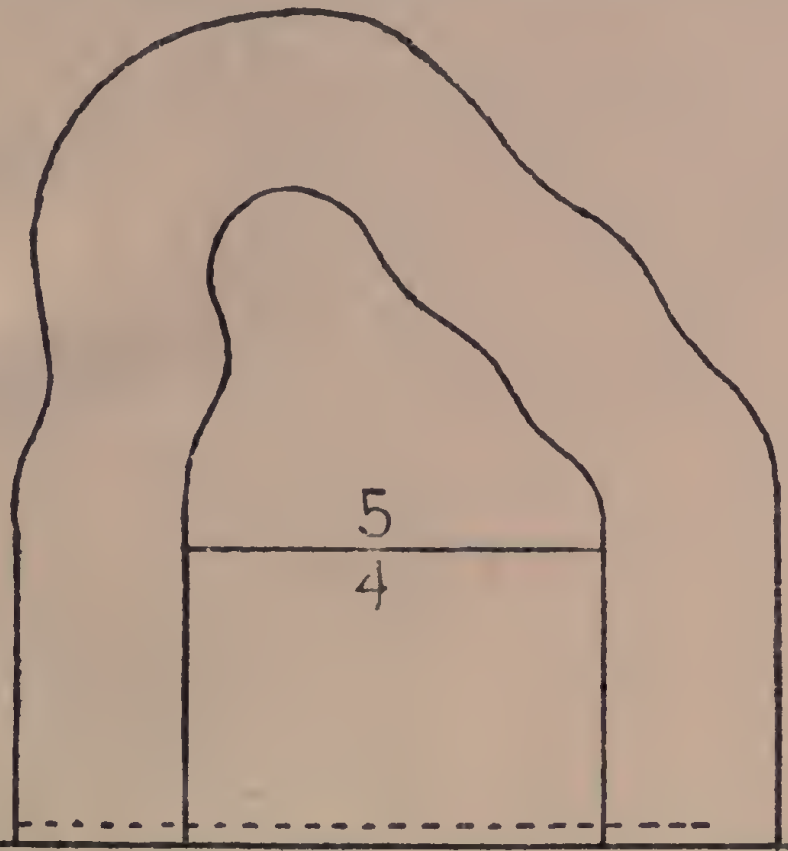
RIFLE NO..... ZERO..... PLACE.....

AMMUNITION..... DATE..... HOUR.....

WIND .....O'CLOCK .....MILES MIRAGE..... LIGHT.....

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING
AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600.....



EVENT .....

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE..... OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

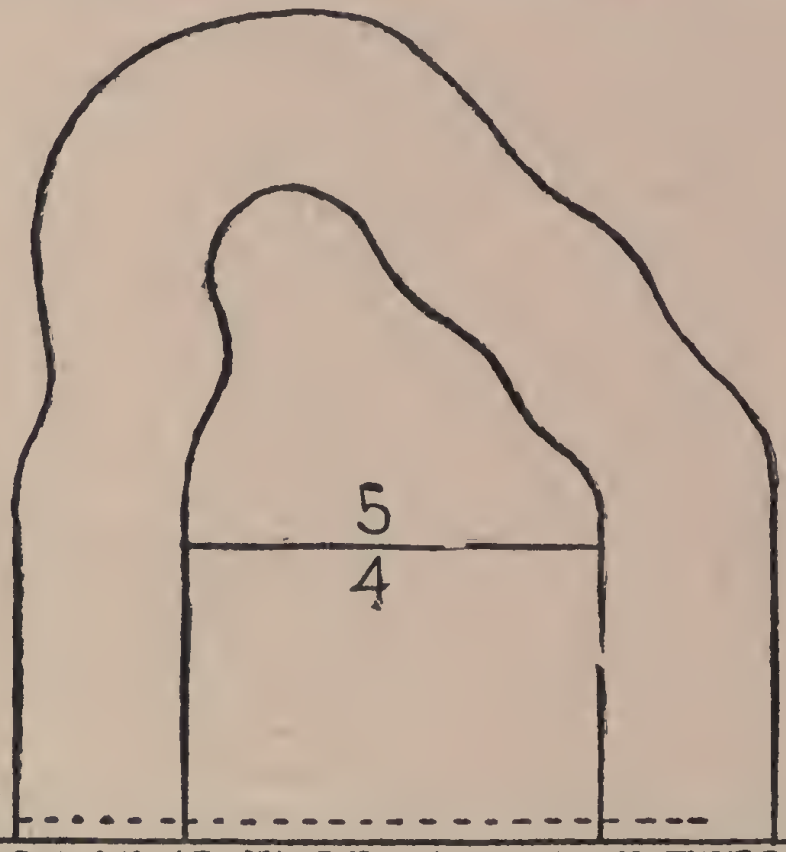
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH

AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.

SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____ OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION.

USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

RIFLE NO_____ ZERO_____ PLACE_____

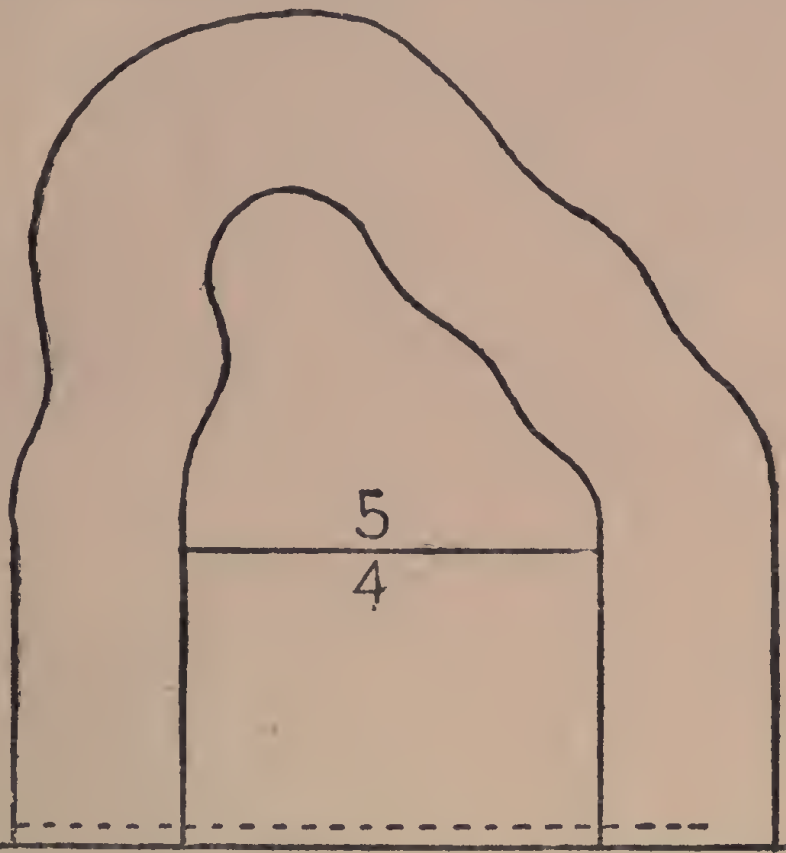
AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.

SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

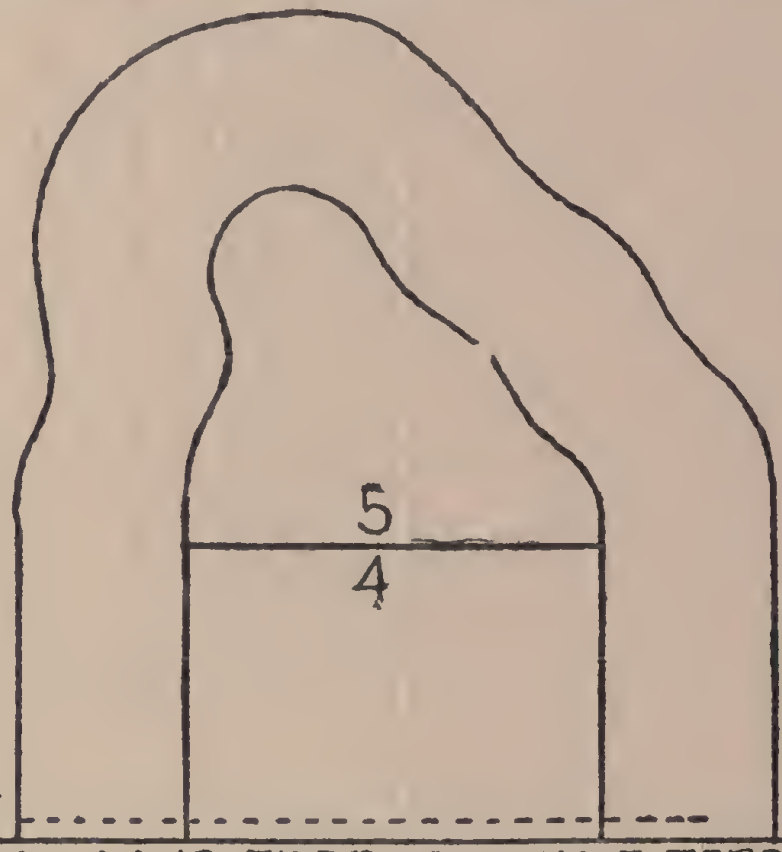
RIFLE NO..... ZERO..... PLACE.....

AMMUNITION..... DATE..... HOUR.....

WIND .....O'CLOCK .....MILES MIRAGE..... LIGHT.....

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600.....



EVENT .....

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE.....OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

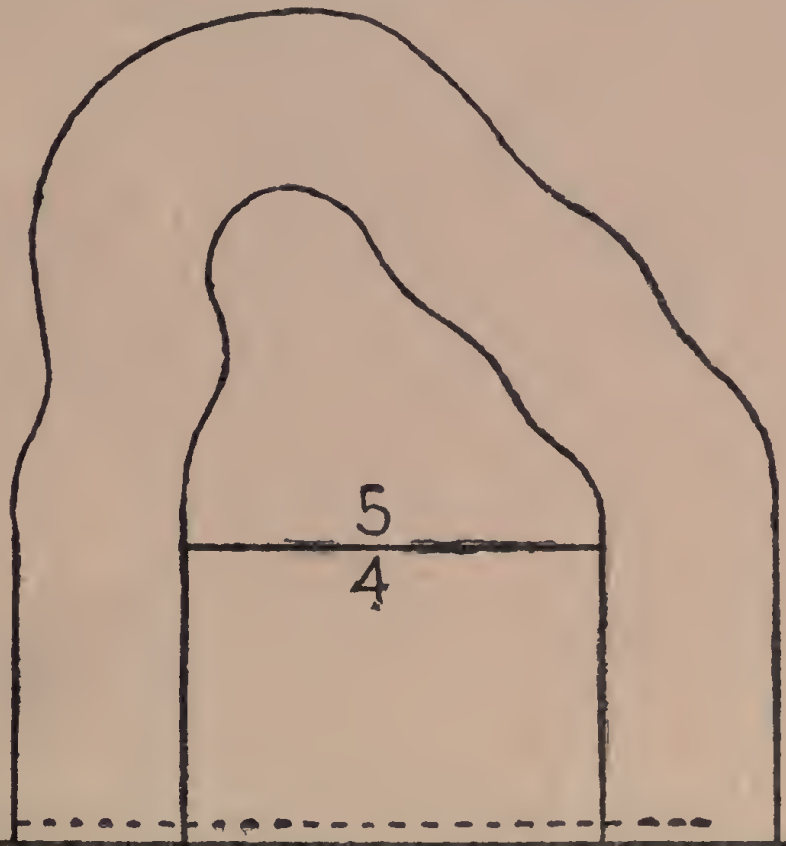
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH

AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.

SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION.

USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES– AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

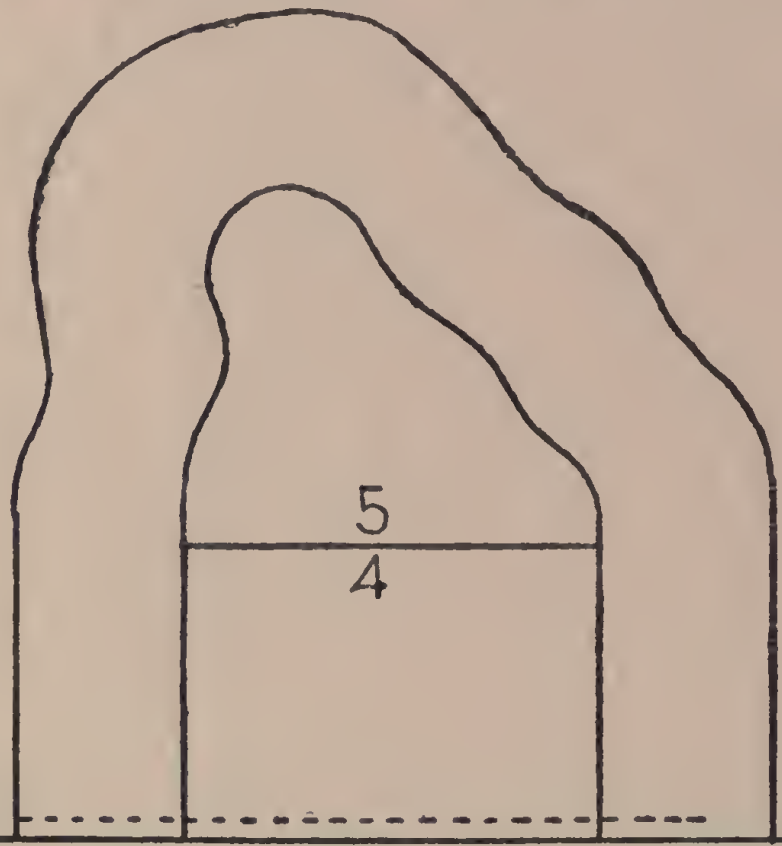
RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK ____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____. OTHER TARGETS FOR WINDAGE

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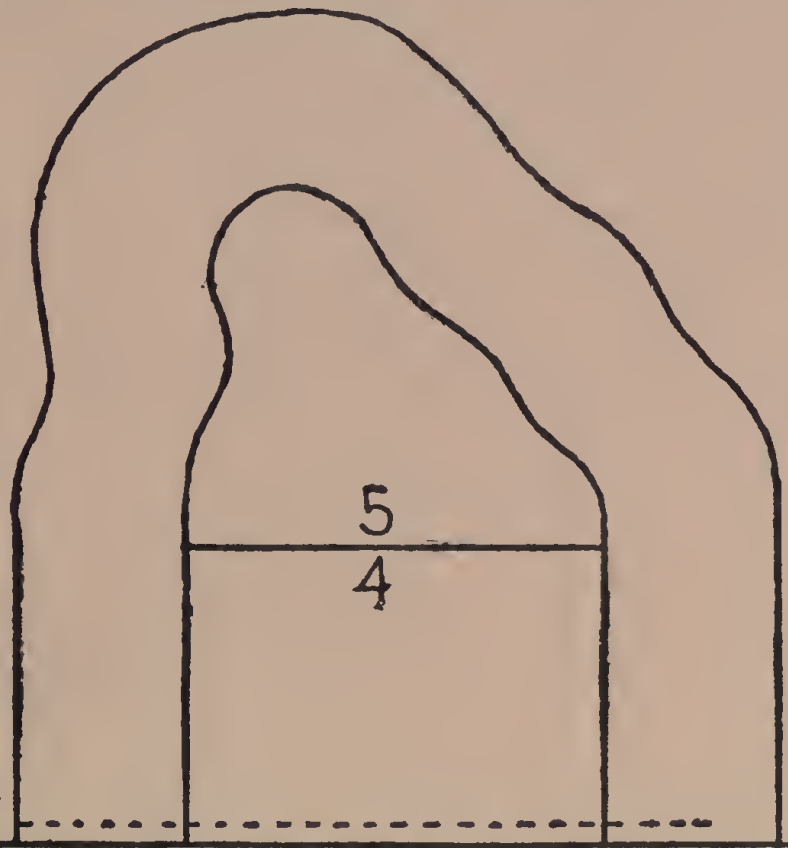
RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING
AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____OTHER TARGETS FOR WINDAGE

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Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

Have bolt in smooth working order. Work it back and forth rapidly a few times before loading.

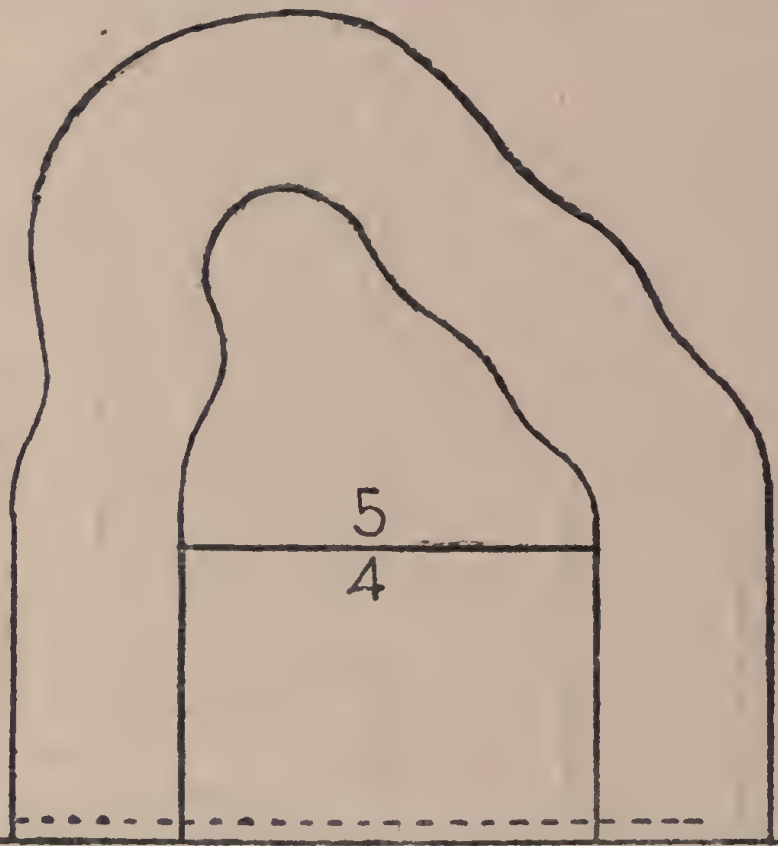
RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____

SKIRMISH

TWOS AND THREES DO NOT COUNT ON SKIRMISH
AT 400 YARDS LAY A CLIP HANDY FOR RELOADING AFTER FIRST SHOT.
SKIRMISH ELEVATION USED AT 600_____



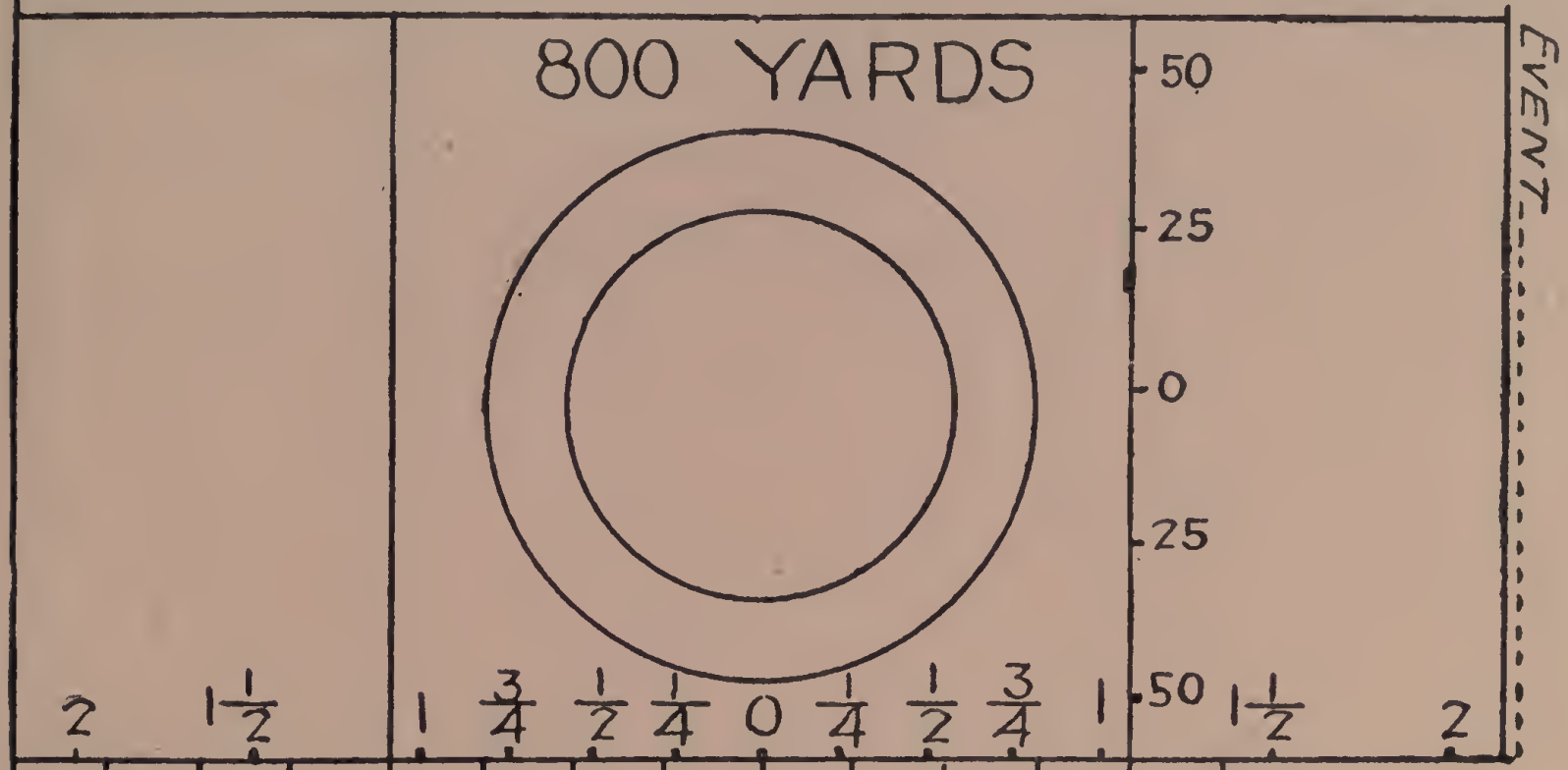
EVENT _____

RANGE	NO Shots	Fives	Fours	OTHER HITS	MISSES
600	2				
500	2				
400	3				
350	3				
300	5				
200	5				
TOTALS	20				
VALUE	X			TOTAL SCORE	

TO CHECK YOUR ZERO EXAMINE TARGETS AND ESPECIALLY THE HITS AT 600 & 500 YDS OF GOOD SKIRMISHERS USING SAME WINDAGE. 600 & 500 YD HITS WERE_____ OTHER TARGETS FOR WINDAGE

USE PEEPSIGHT AT 600 YARDS AND USE 50 YDS LOWER THAN SLOW FIRE ELEVATION. USE BATTLESIGHT AT ALL OTHER SKIRMISH RANGES— AIM LOW BOTTOM OF ENTIRE TARGET IS USUALLY THE CORRECT PLACE TO AIM. DO NOT CHANGE WINDAGE BETWEEN 600 & 500 AFTER 500 TAKE OFF WINDAGE GRADUALLY.

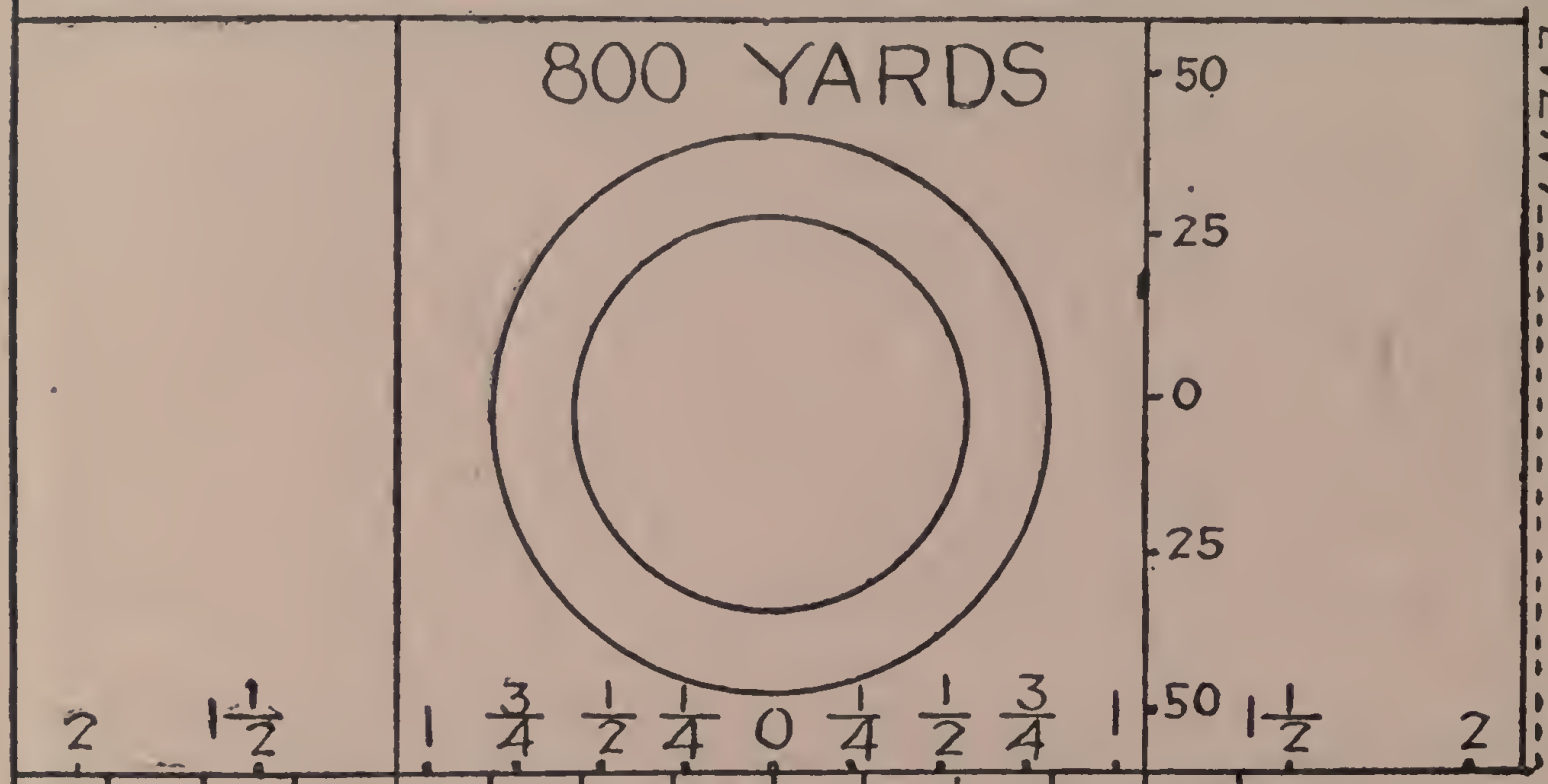
RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



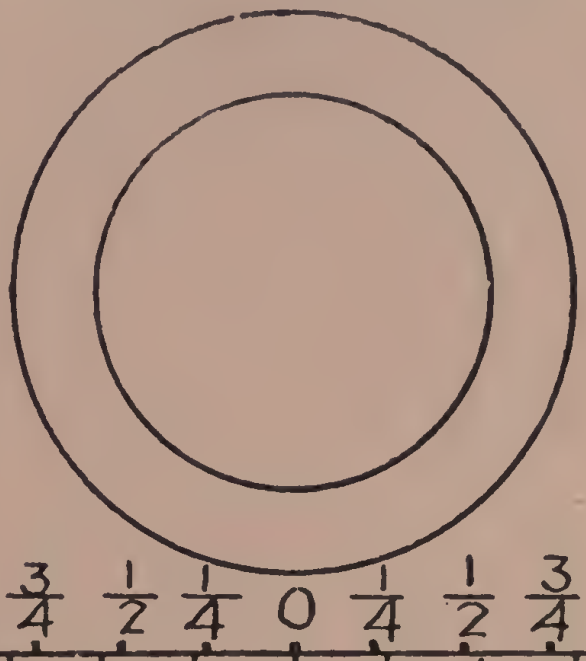
No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.G.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO_____ ZERO_____ PLACE_____

AMMUNITION_____ DATE_____ HOUR_____

WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



EVENT_____

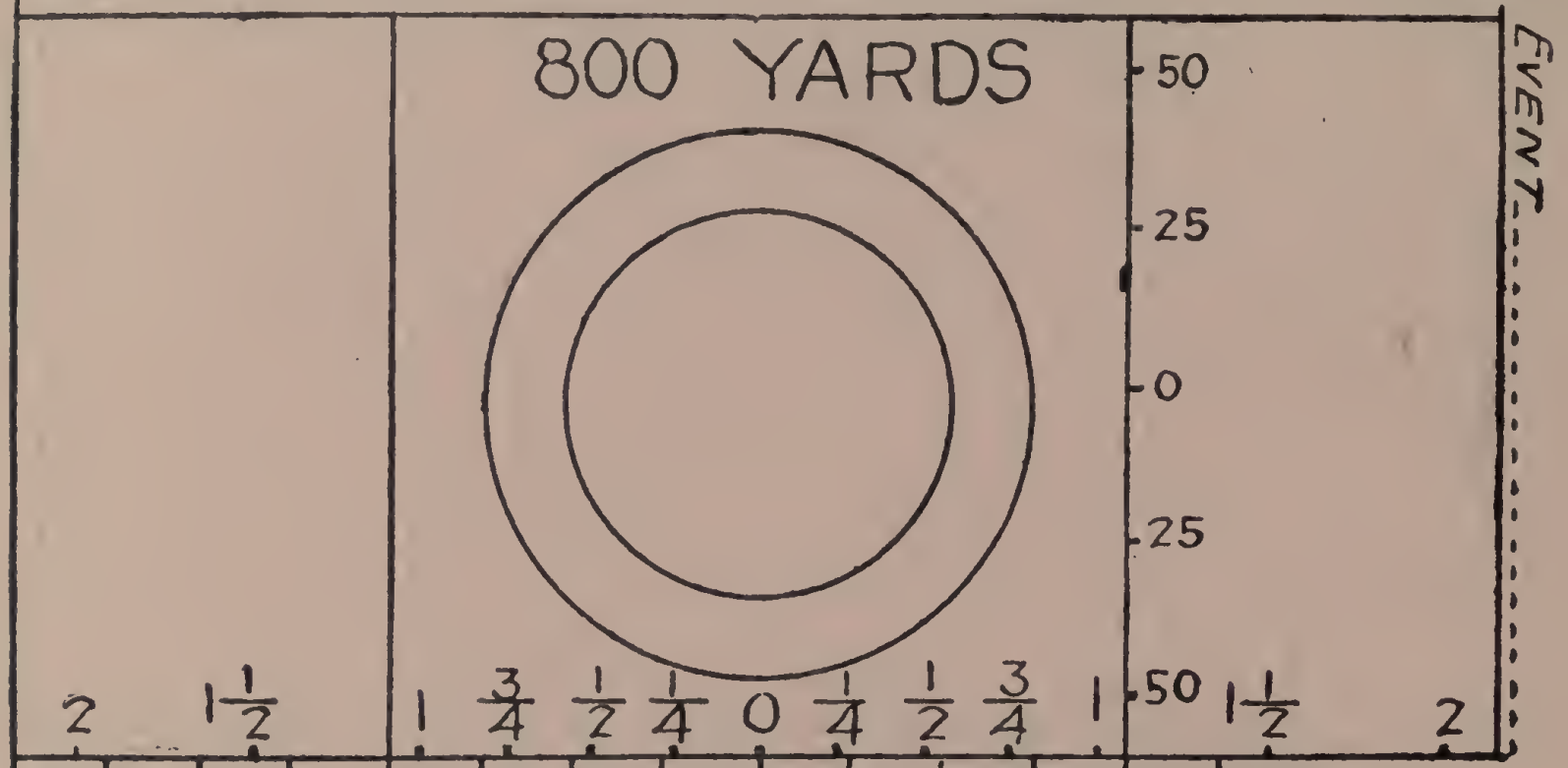
50 25 0 25 50

2 1½ 1 ¾ ½ ¼ 0 ¼ ½ ¾ 1 1½ 2

No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

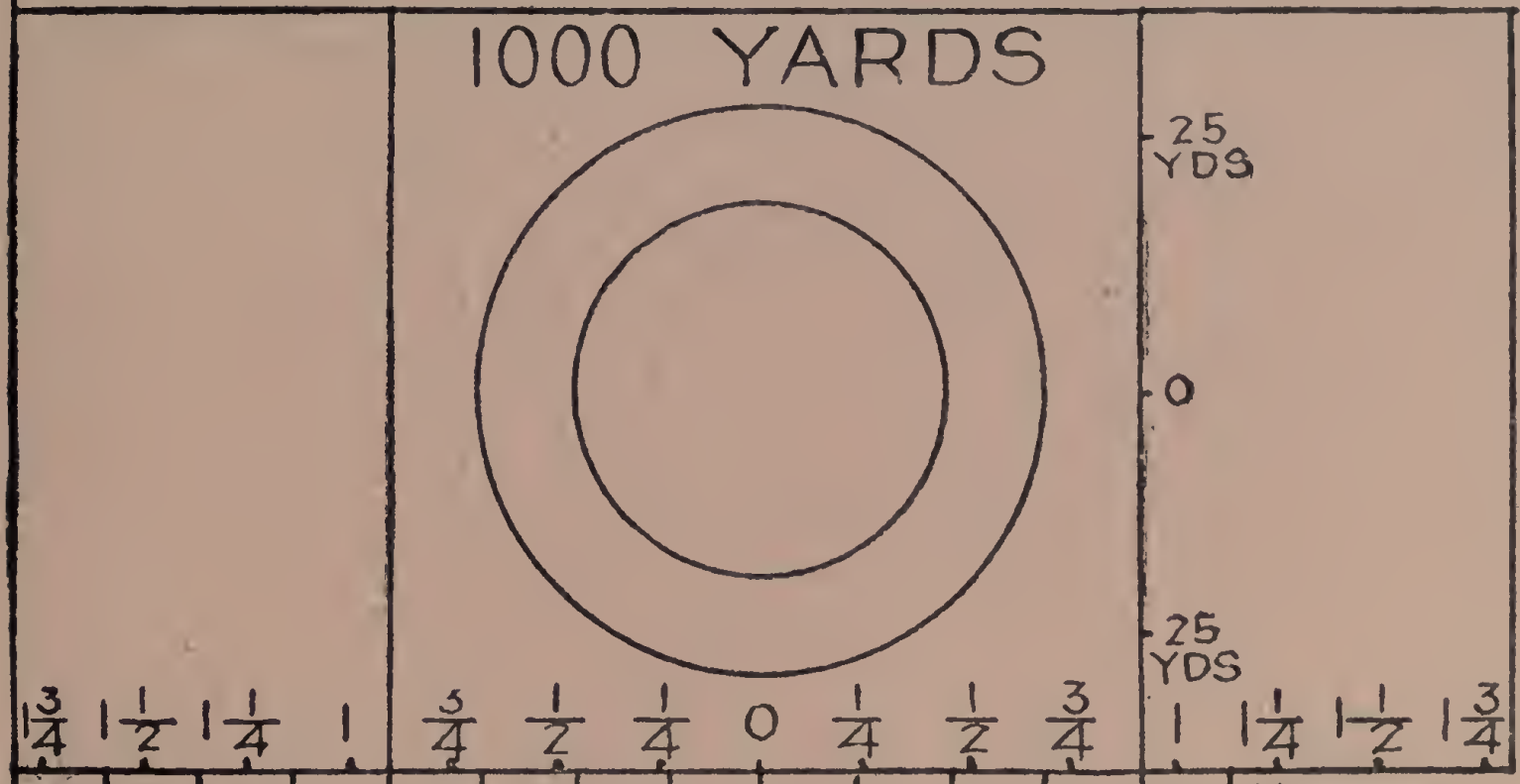
RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



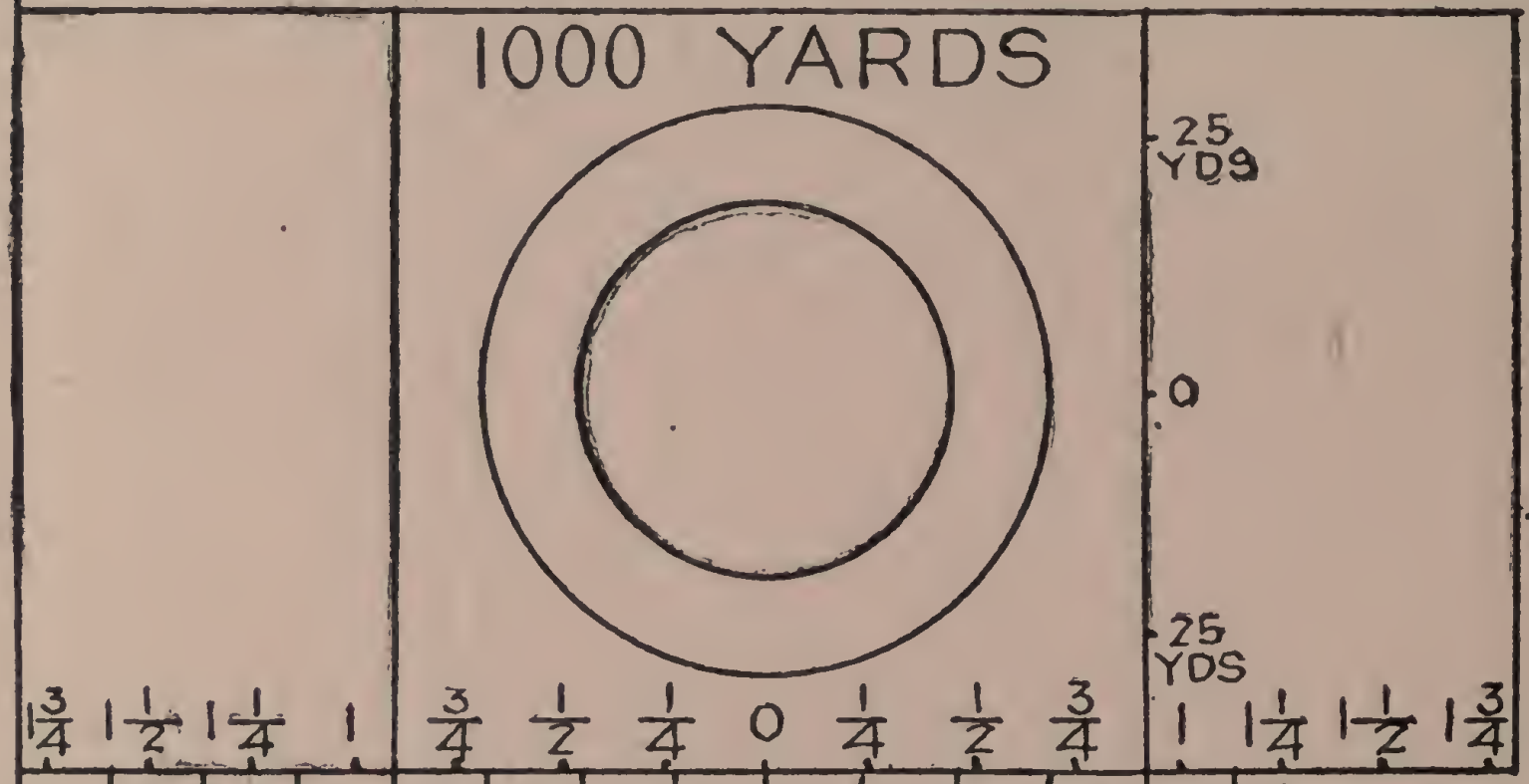
No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.G.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

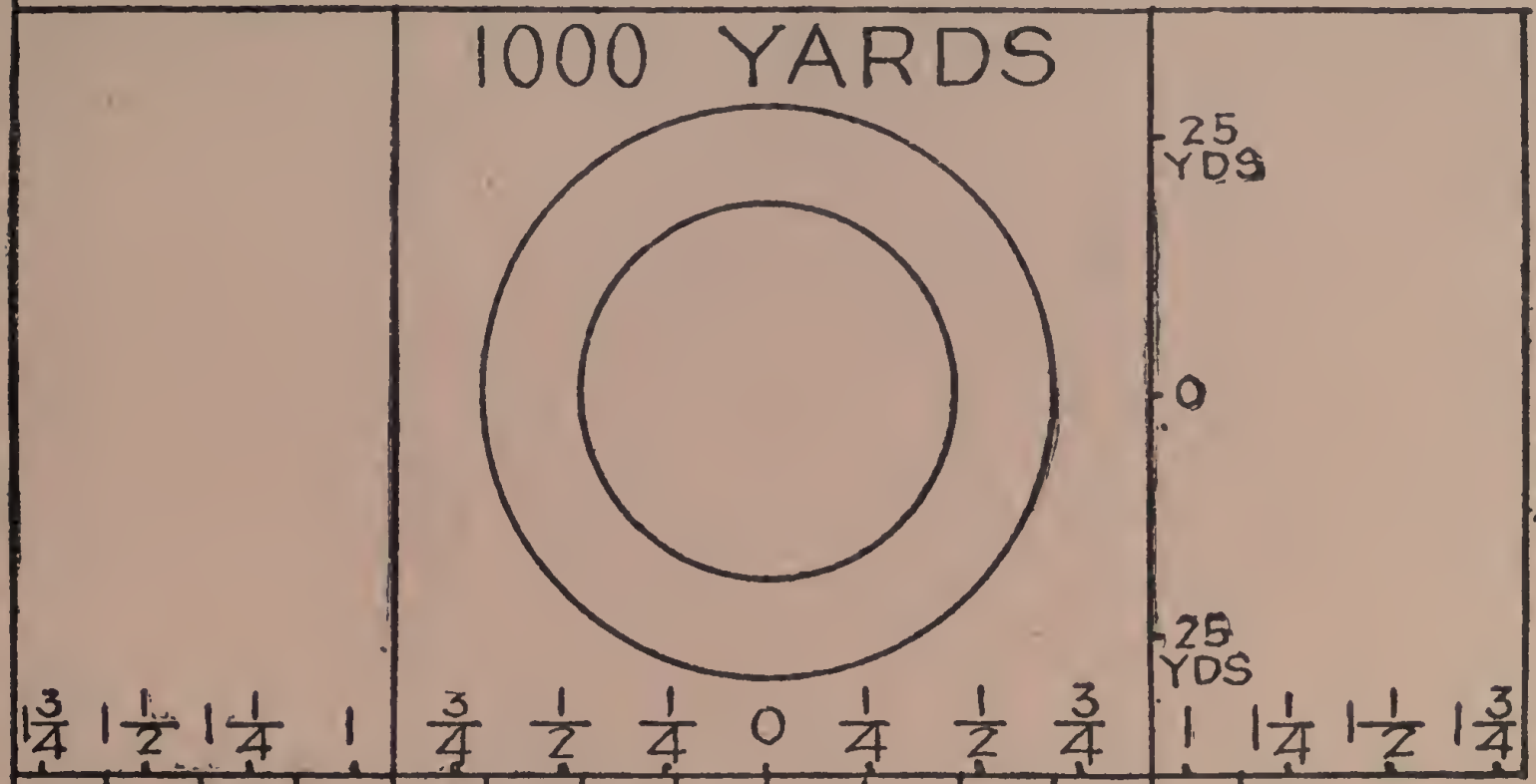
RIFLE NO._____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____ O'CLOCK ____ MILES MIRAGE_____ LIGHT____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



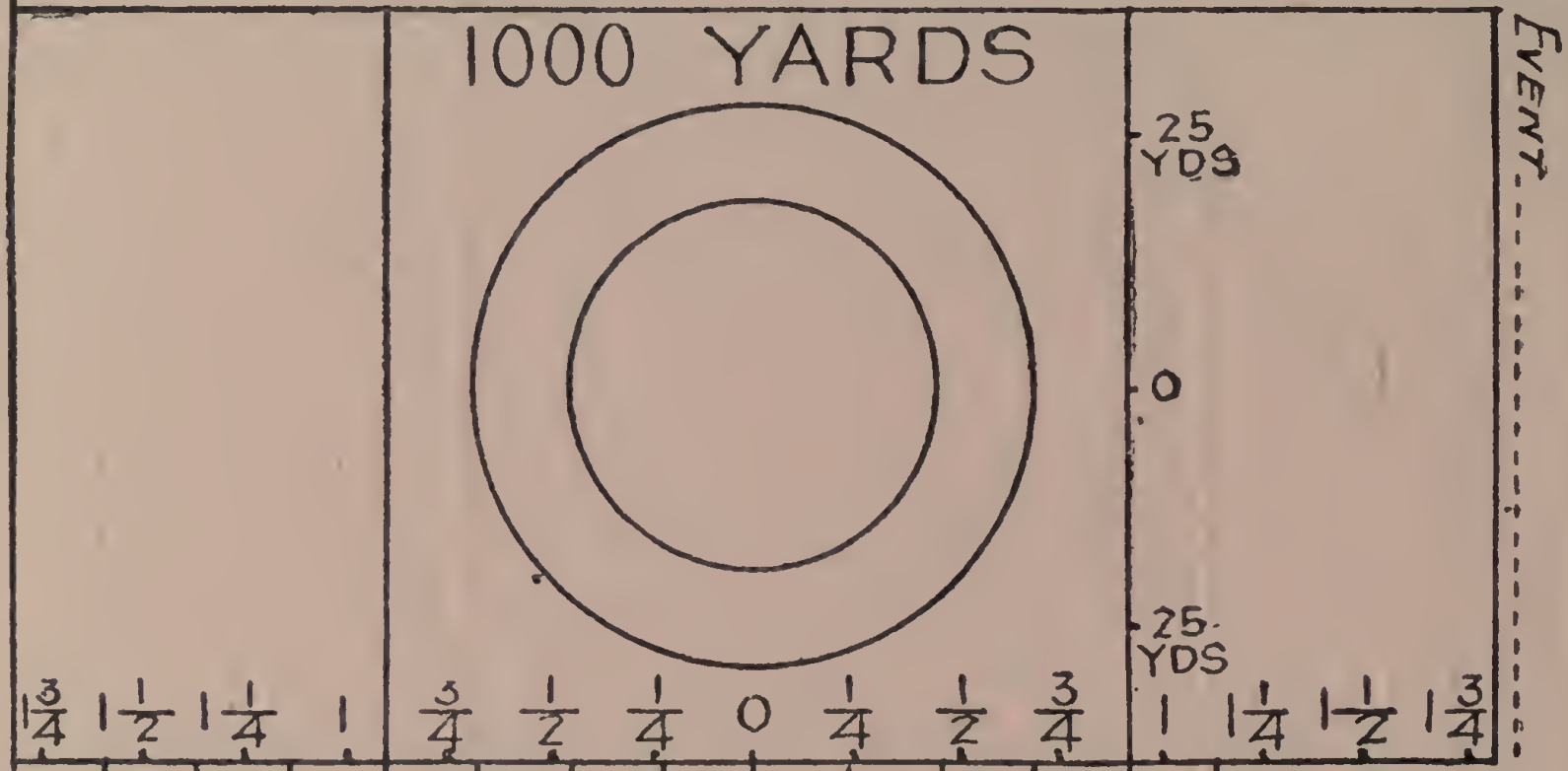
No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.G.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

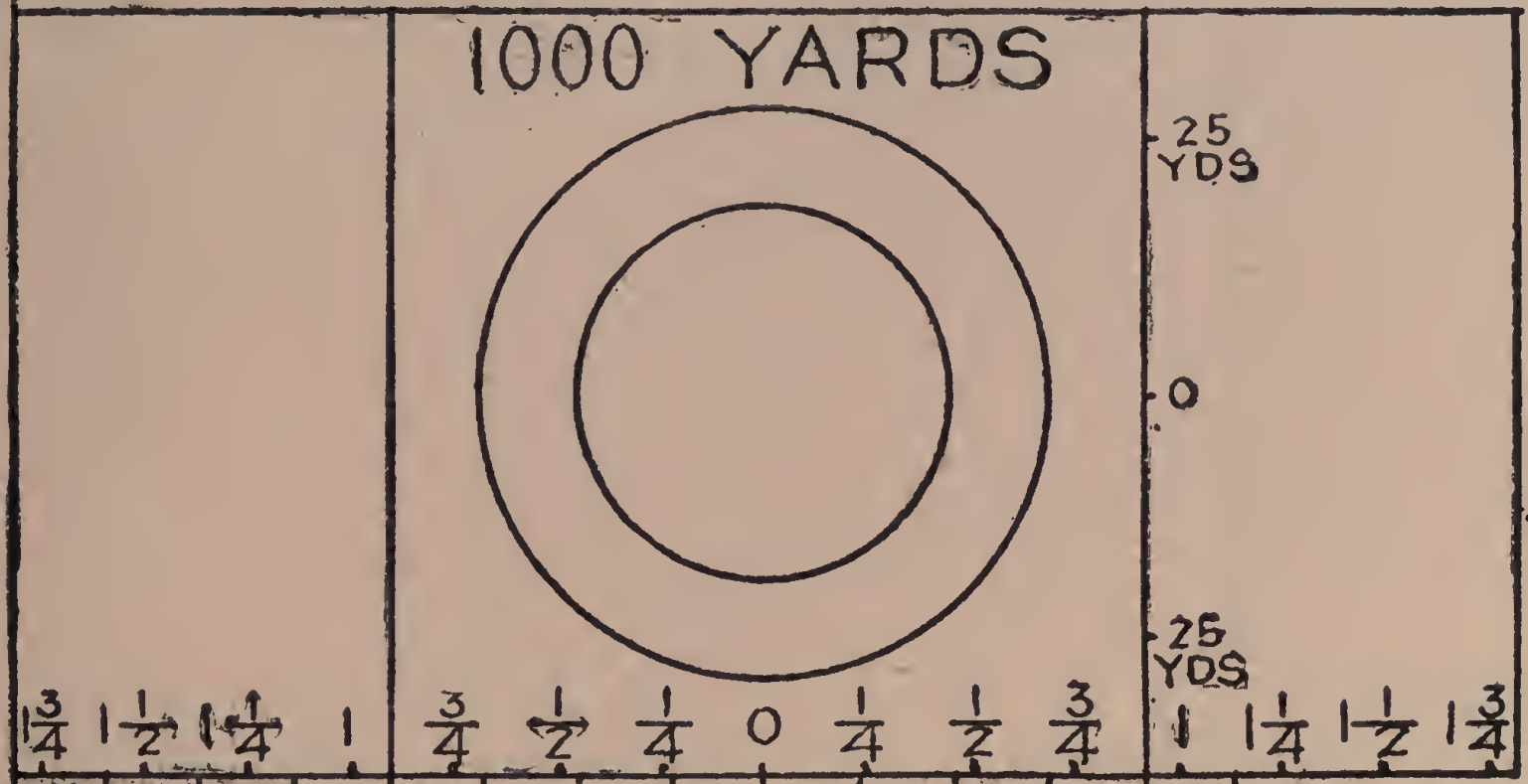
RIFLE NO..... ZERO..... PLACE.....
AMMUNITION..... DATE..... HOUR.....
WIND .....O'CLOCK .....MILES MIRAGE..... LIGHT.....



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.G.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____O'CLOCK _____MILES MIRAGE_____ LIGHT_____



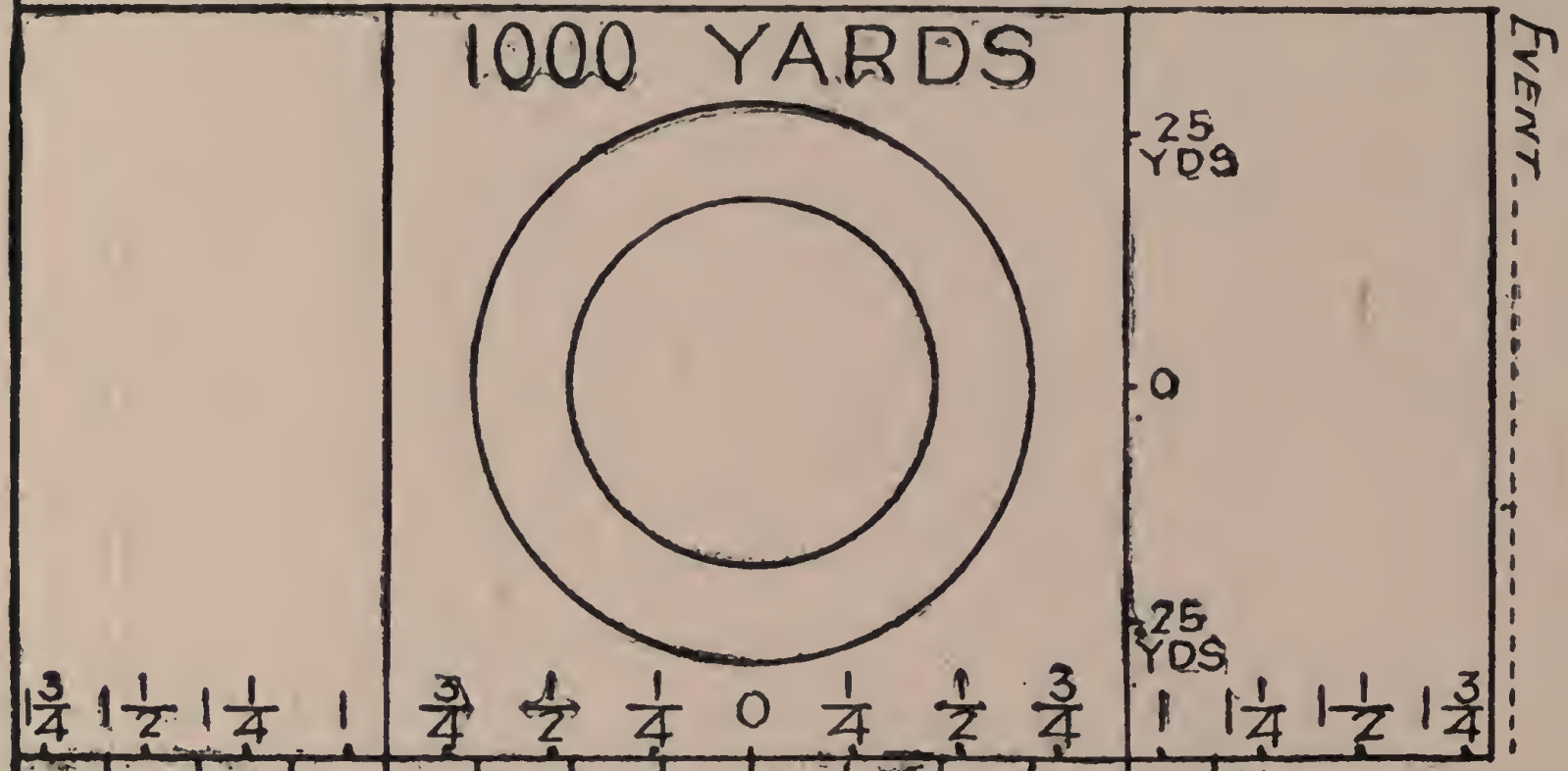
No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

Three sighting shots are required in the regular course for qualification. Almost all matches require two.

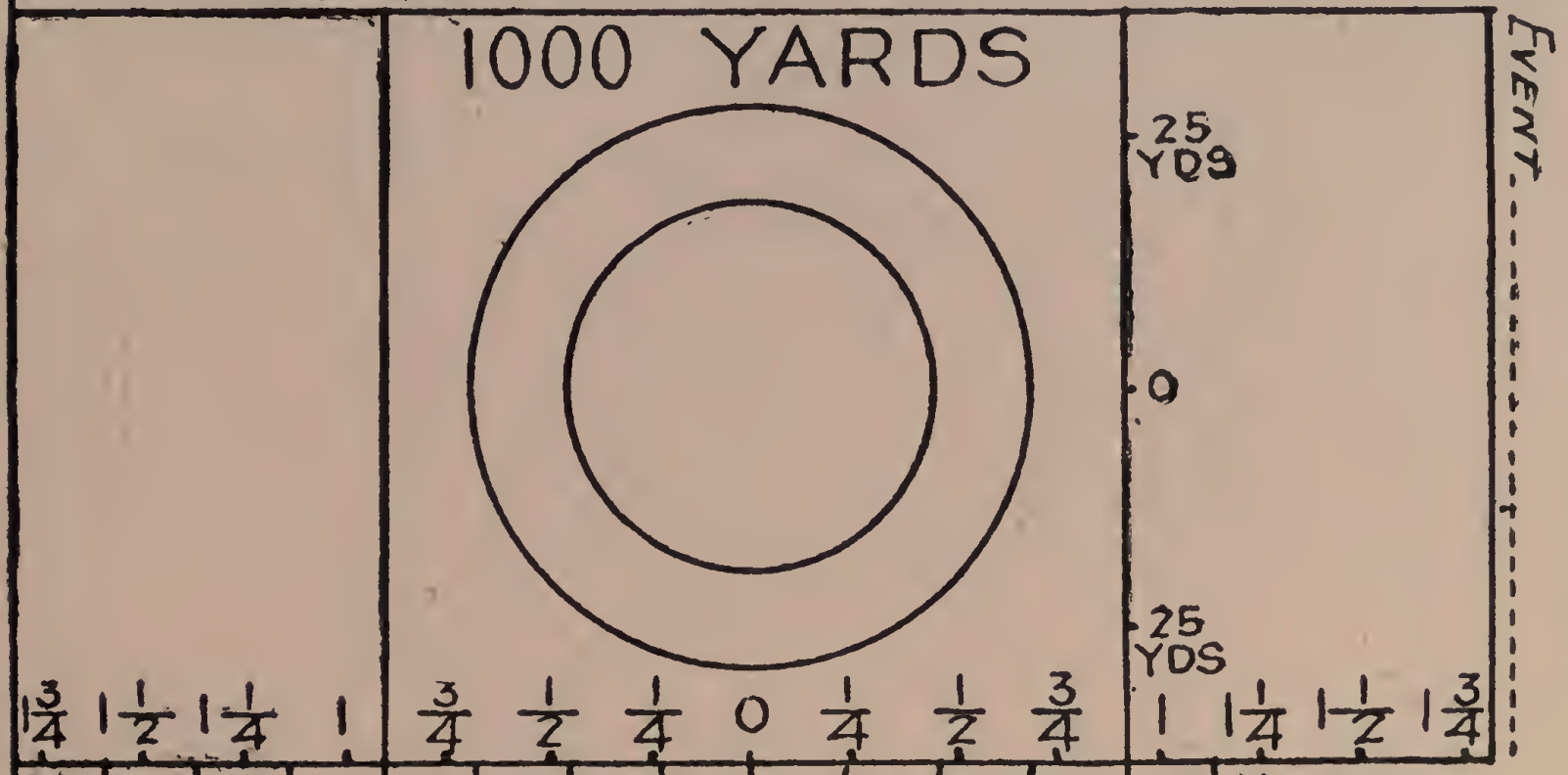
RIFLE NO._____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND ____ O'CLOCK ____ MILES MIRAGE_____ LIGHT____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

RIFLE NO._____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND _____ O'CLOCK ____ MILES MIRAGE_____ LIGHT____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.G.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

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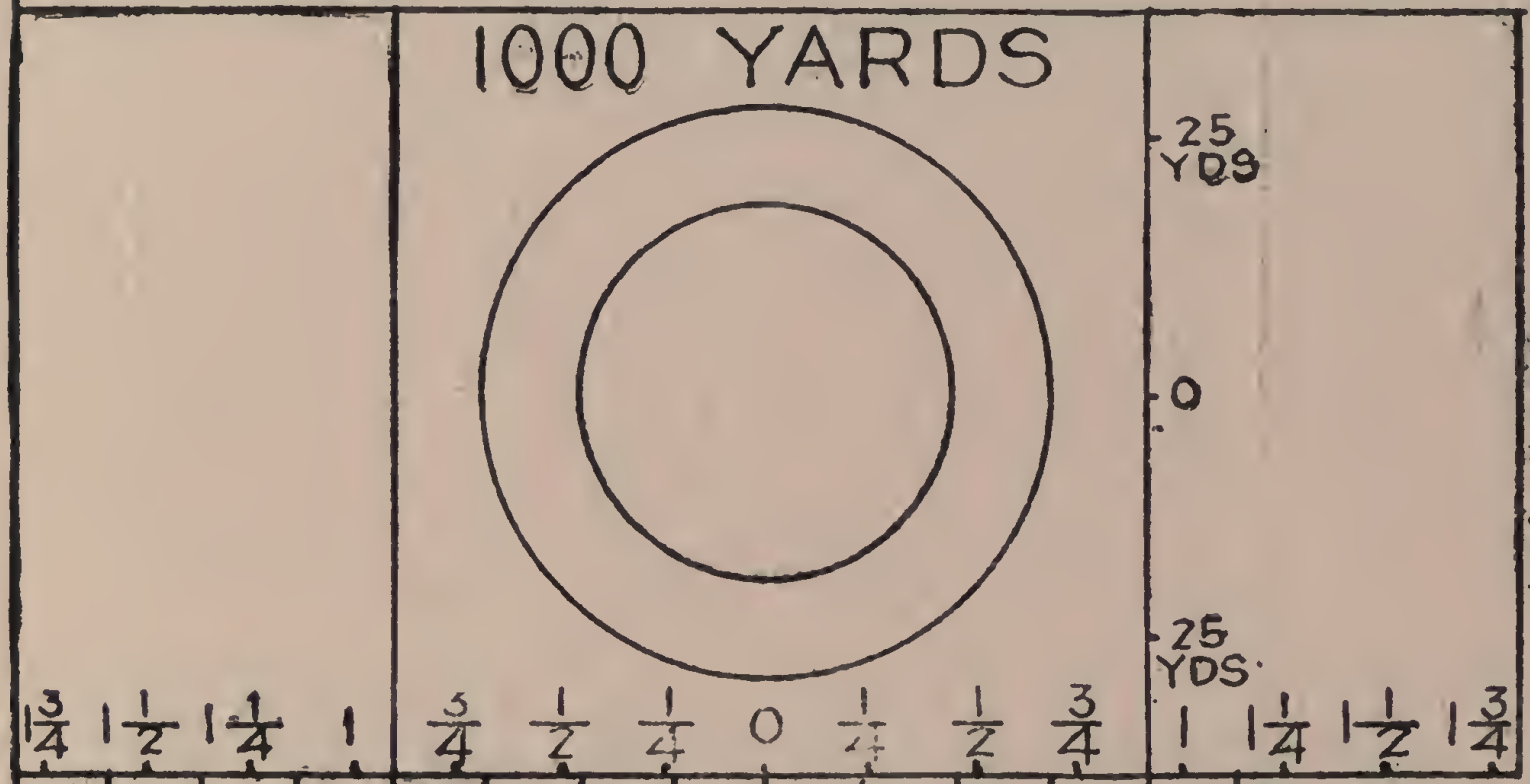
RIFLE NO_____ ZERO_____ PLACE_____
AMMUNITION_____ DATE_____ HOUR_____
WIND_____ O'CLOCK_____ MILES MIRAGE_____ LIGHT_____



No	S	S	1	2	3	4	5	6	7	8	9	10	NOTES
Elev													
W.C.													
Pull	O	O	O	O	O	O	O	O	O	O	O	O	
VALUE	X	X											

TOTAL SCORE

PART II

The remaining contents of this book are more especially for the information of those who have learned in practice the principles taught in the first part of the book. Practical experience in training men to shoot has shown that it is better not to confuse men with the more advanced parts of the work until they have become familiar with the simple and necessary part of the training. What follows is for the information of officers and non-commissioned officers and for those who have acquired sufficient ability and interest in shooting to make other features profitable and interesting to them. What follows is not really advanced instruction but only such as the ordinary well-informed rifleman should know and what is the very least any one who is to assist in the instruction of men should know. Shooting offers a limitless field for work and investigation, and probably no man will ever exhaust the field or become so advanced that there will be nothing more for him to learn.

THE MICROMETER OR VERNIER.

The micrometer or vernier is a small instrument for making very small and accurate changes in elevation. It is constructed so that a movement of one of its divisions makes a change on the target equal to one inch for each 100-yard range. For example: A change of one division called minutes or degrees on the microm-

eter at 200 yards gives us a change of 2 inches on the target; 600 yards, 6 inches; 1000 yards, 10 inches, and so on for every range. The best way to learn to set and read a micrometer is to get an experienced man to show you. The instrument is very simple and it is used by all the most expert shots. It is not advisable, however, to teach its use to inexperienced men. When using the vernier the following are the changes made between the different ranges:

200 yards
3
300 yards
3
400 yards
4
500 yards
4
600 yards
5
700 yards
6
800 yards
7
900 yards
8
1000 yards

Examples: If shooting at 500 yards raise the sight 4 minutes when you begin to fire at 600 yards; that is, if your sight was set at the micrometer reading of 45 at 500 yards, you would set it at 49 when you started to shoot at 600 yards. Another example: Suppose you were shooting at 800 yards, using the micrometer elevation of 60, then if you moved back to the 1000 yards you would raise the sight 7 plus 8 or 15 minutes, so that your micrometer elevation at 1000 yards would be 75.

THE WINDAGE RULE.

$$\frac{\text{Range X Velocity}}{10} = \text{number of quarter points of windage required for 3 or 9 o'clock winds.}$$

Winds 1 hour away from 3 or 9 o'clock, that is, 2, 4, 8 and 10 o'clock winds, require only slightly less windage; winds 1 hour away from the 12 and 6 o'clock line, that is, 11, 1, 5 and 7 o'clock winds, require about half as much windage as the 3 or 9 o'clock winds. Example: When shooting at 600 yards call the range 6, and if the wind is blowing 5 miles per hour call the velocity 5, then range x velocity is 6x5 or 30; this divided by 10 gives 3. Then the windage required for a 3 o'clock wind would be ¾ of a point right windage and for a 9 o'clock wind ¾ left. Another example: At 1000 yards an 8-mile wind would require $\frac{10x8}{10} = 8$ quarters or 2 points for a 3 o'clock wind (right windage) or 9 o'clock wind (left windage). If the wind were from 2 or 4 o'clock, it would require about 1¾ right, and if from 8 or 10 o'clock, about 1¾ left. If it were from 1 or 5 o'clock, it would require four quarters or 1 point right windage, and if from 7 or 11 o'clock, 1 point left windage.

If trees or other objects obstruct the wind, the effect of the

wind on the bullet is less than if the wind is unobstructed, and you must allow for this in estimating windage. The best rule for a beginner is to ask an experienced man where to set the wind gauge.

Remember that for any wind the wind gauge is first set to the windward and then after you hit the target, if you move the wind gauge right or left, it carries the bullet in the same direction.

6 or 12 o'clock winds, that is winds blowing from behind or ahead, do not deviate the bullet laterally and require no windage, but they are bad winds to shoot in, for they seldom blow in one direction steadily and are called fish tail winds, and the least change in direction moves the bullet to the right or left considerably, while slight changes in the direction of cross winds (3 or 9 o'clock) do not affect the bullet so much. A good steady cross wind, even if it is very strong, is a good kind of a wind for mid range or long range practice.

Theoretically, 6 o'clock winds accelerate the bullet, calling for lower elevation, and 12 o'clock winds retard the bullet, calling for higher elevation, but practically with the new Springfield rifle wind has little effect on elevation and, except when it is very strong and then only at long range, its effect in elevation is so slight that it need not be considered.

THE QUARTER POINT RULE.

CHANGING THE WIND GAUGE ¼ POINT MOVES THE BULLET ONE INCH FOR EVERY 100 YARDS OF RANGE. For example:

¼ point at 200 yards moves the bullet 2 inches on the target.
¼ point at 300 yards moves the bullet 3 inches on the target.
¼ point at 500 yards moves the bullet 5 inches on the target.
¼ point at 600 yards moves the bullet 6 inches on the target.
¼ point at 800 yards moves the bullet 8 inches on the target.
¼ point at 1000 yards moves the bullet 10 inches on the target.

The above is a very easy rule to remember. Notice that a change of ¼ point in windage moves the bullet right or left the same amount as a change of a minute on the micrometer moves the bullet in elevation.

The marks at the bottom of the target in the score book show how much to change the windage for hits directly above the mark, but you may not always have your score book with you and it is well to remember the simple rule.

THE SQUARE RULE.

CHANGING THE ELEVATION 100 YARDS AT ANY RANGE GIVES CHANGE ON THE TARGET EQUAL TO THE NUMBER OF INCHES IN THE SQUARE OF THE RANGE. Example: At 200 yards changing the elevation 100 yards gives 4 inches change on the target; at 300 yards, 9 inches; 500 yards, 25 inches; 600 yards, 36 inches; 800 yards, 64 inches; 1000 yards, 100 inches. Changing 50 yards gives half as much, and chang-

ing 25 yards gives quarter as much. For example: When shooting at 600 yards, changing the elevation 25 yards gives a change of 9 inches on the target; at 800 yards, 16 inches, and at 1000 yards, 25 inches.

This rule is not exact but is close enough for all practical purposes.

The mark on the side of the target in the score book shows how much to change the elevation, but you may not always have your score book with you and you should remember the square rule.

Do not make changes in windage or elevation boldly. Make a little less change than what the score book or the rules would call for. In practice you will find that changes sometimes carry the bullet more than you would expect. Change cautiously.

NOTES ON SHOOTING.

A few years ago, extensive systems of "dope" prevailed. The Krag rifle then in use and the ammunition were usually so inaccurate that failure to shoot accurately was assigned to a great number of causes, among them heat (thermometer), pressure of air (barometer), moisture in the air (hygrometer) and other weather conditions. A rifle team outfit then resembled a weather bureau. These conditions do theoretically and slightly influence elevations, but to such a small extent that they need not be considered with the new Springfield rifle and the excellent ammunition now made for it.

There are two conditions which do considerably affect elevations at long range; they are light and mirage. Their effect is not noticeable at short range and is small at mid ranges (500 and 600 yards), but is considerable at long ranges (800 and 1000 yards). The effect on elevations by head and tail winds is noticeable at 1000 yards and strong winds require an allowance of not over 25 yards at 1000 yards. Higher elevation is required for head winds and lower elevation for rear winds.

Mirage. Mirage is the heat waves often noticed with the naked eye, but more clearly seen with the telescope. It is really the air traveling on the range. It is the best guide for windage because as seen through the telescope directed at the target it is

the actual air through which the bullet travels, while flags may show currents of air moving in other directions. When the mirage and flags do not agree, which is often the case on the range, the mirage is the true guide.

The ability to see clearly the correct movement of the mirage and estimate its rate or speed and to see it stop and change direction comes only by practice and study. The beginner can easily see the disturbance of the air, but at first is usually unable to tell whether it is moving to the right or to the left, or to detect slight changes in its speed. The best way to acquire ability to skillfully use the mirage is to constantly study it through the telescope while shooting, and get help from some experienced "wind doper" who will watch it with you.

The ability to use the mirage skillfully in shooting is what distinguishes the real long range match rifleman from the novice.

Strong winds dispel mirage.

The information obtained from the mirage is more valuable when the wind is light and especially when it is fishtailing, that is, shifting from one side to the other. You cannot keep track of the direction of the fishtail winds by the flags, but the mirage will tell you exactly. Any good holder can make a good score in a cross wind, but the real test comes when handling fishtail winds.

Heavy mirage calls for higher elevation. A heavy mirage causes a wavy appearance of the target, making the target to appear to dance up and down, thus making its lower edge appear

lower than it really is, and consequently when the sight is held under the objective, higher elevation is required. At 1000 yards the additional elevation required is sometimes as much as 25 yards or 2 or 3 minutes on the micrometer.

When the wind is fishtailing the mirage changes direction, that is, sometimes moves to the right, and sometimes to the left. When there is no movement to the right or left, the wind is either still for the moment or the wind is carrying the mirage directly towards or from the target. The mirage then appears to rise, and is said to be "boiling." Try to avoid shooting in a "boil," for this is when elevations are more disturbed and you are liable to get a miss (below the target). The mirage "boils" just as it changes direction from right to left or from left to right. Wait for the mirage to take a movement to the right or left; it never "boils" long. If you get one of the misses described above, don't get excited and begin to make changes but watch the mirage and be careful to avoid the "boil" the next time. This accounts for some of the misses which inexperienced shooters are apt to call "unaccountables" and for which they blame the ammunition, or something else beside the true cause.

When a pair are shooting together they should watch the mirage and coach each other.

A light mirage which is not in a "boil" does not appreciably affect elevation.

Light. A change in conditions from bright light, (sunshine), or dull light, (cloudy), requires changes in both elevation and windage.

If you are shooting in a dull light and the sun comes out, your shots will then strike low, and if the sun is to the right your shots will also strike to the left, or, if the sun is to the left your shots will also strike to the right.

The effect of light must therefore be compensated for, and the rule is to **move your sight into the sun both for elevation and windage.** In other words if shooting in a dull light and the sun comes out raise your elevation and move the windage to the right if the sun is to the right or to the left if the sun is to the left.

The amount of change to make for sunlight has been found by practical experience to be from ¼ to ½ point on wind-gauge and about 25 yards in elevation.

A good plan for mid and long range slow fire when shooting in changing lights is to wait as much as possible and try to fire your shots under the same light conditions.

Do not concern yourself with the question of dull targets and bright sights or dull sights and bright targets unless you are in an investigative turn of mind and wish to do some experimenting at the expense of your score. A cloud never hangs steady so as to shade only a part of the range for any great length of time. Wait for a uniform condition either bright or cloudy and remember the general rule: **dull lights, lower elevations; bright lights, higher elevations and move wind-guage into the sun.**

The best condition for shooting to determine the zero of a rifle is a dull light or cloudy day; five hundred yards is the best range for determining the zero; at shorter ranges a change of a quarter of a point gives too small a change (at 200 yards it is only two inches) on the target and at ranges longer than 500 yards the trajectory begins to get unsteady and unreliable.

Bear the sun rule in mind and you will not accuse your rifle of changing its zero so often.

In using battle sights you must hold higher in bright light than in dull light, and when you "sight in" for skirmish or rapid fire remember and note in score book whether the light was bright or dull.

Strong eyes require less change for light and some men have eyes strong enough not to be disturbed by change of light.

Different opinions from those stated in regard to mirage and light are held by some but ample experience has thoroughly confirmed the statements given here.

The experience of good shooters is that for all conditions affecting elevations, there is rarely a difference even at 1000 yards of over 50 yards or 5 minutes on the micrometer, between the average elevation used and the highest or lowest elevation for any rifle. Do not get the idea that these conditions are going to puzzle you seriously, because with your average elevation at any range you ought almost always to hit the target with your first shot, and you can then make necessary changes to bring your shot into the bull's-eye. Your sighting shots will enable you to start your record string off good.

FINDING THE TARGET.

If the target is not hit by the first shot, the trouble is probably in elevation, because any error in estimating the windage should not be sufficient to carry your shot off the target. To find the target, make changes in elevation of 50 yards at a time, first down

and then up, because if the shots have struck just a little low, you will probably have seen a splash of dirt, and the chances are that your shot went high. Often misses are the result of neglecting to set the sight, or of the sight slipping down. First examine your sight and see that the windage has been set on the correct side, and then if you have made no mistake you should begin by coming down 50 yards, then if you miss again come up 50 yards from the original elevation, and so on until you find the target. If you change more than 50 yards at 1000 yards you are liable to jump the target.

Telescope: A telescope is needed for mid and long range shooting. The telescope is placed on a rest so that you can easily place the eye to the telescope while watching the mirage, and just after shooting so that you can see your spotter (shot marks). A camp stool upside down is a fine telescope rest. You cannot see the spotters with the naked eye at long range, and they are often hard to see at mid range. Every butts should be provided with spotters which are placed in the shot holes to show the exact location of the hit. The plan of putting the marking disk over the hit, and not using a spotter is not accurate enough as the markers are often careless, and the shooter may not see the disk. The spotter shows the location of the hit accurately, and the shooter can look at it at his convenience. Spotters are easily made, and their use should never be dispensed with in slow fire.

REMARKS ON METHODS OF INSTRUCTION.

Before a man goes on the range to fire three things are absolutely necessary. He must know,

(1) How to set the sight.

(2) How to sight or aim.

(3) How to hold the rifle in all positions and the general principles for all shooting, such as not canting the rifle, squeezing the trigger, etc.

If he does not know these things it is worse than useless for him to fire. He will not improve and the more he shoots the worse he will shoot and it will become more difficult to teach him.

It is not sufficient to merely tell him or show him these things, he must be required to do them himself and to show his instructor that he thoroughly understands them.

Thoroughness in the instruction of riflemen is absolutely necessary and while it may all seem simple after it has been learned, it is a mistake to presume that the inexperienced man knows anything about the rifle or how to use it.

The other stages of a man's instruction though not as important as the above are nevertheless very important, they are:

(4) A knowledge of the names of the parts of a rifle and how to work them and especially how to remove and dismount the bolt.

(5) How to clean and take care of the rifle.

(6) The course to be fired, the kinds of fire, the number of

shots, the targets used, positions, time limits, requirements for qualification, etc.

(7) The names and dimensions of targets. For what kinds of fire and at what ranges the various targets are used. The value of hits, etc.

(8) O'clock of hits and winds.

(9) Marking and scoring.

(10) The zero of the rifle.

(11) The meaning of the elevation and windage marks on the diagram targets in the score book, that is, the effect on the target of changes of the sight; also how to keep the score book.

(12) How to behave on the range.

All of this instruction can be given before the men arrive at ranges and in order that the maximum amount of work on the range may be done and that men be removed from their stations and duties the minimum amount of time, the duties of the range personnel should be to examine the men and to permit to fire without delay, those men who have been previously instructed, to detain those men not previously instructed and to provide coaches to see that men as they fire do not neglect the instruction received.

Some remarks on the different stages of instruction follow:

(1) Sight Setting (Part I, page 19).

Simple as this may seem men do not know it intuitively. Frequently men are found who have fired a season's practice and are still unable to set the sights.

The following method thoroughly done will "qualify" a man in sight setting:

Take all the men you have, select several of them as assistants; as the sight is set each time, first inspect the sight of the assistants then cause the men to pass through the line of assistants and have their sights inspected.

Have the peep sight set at a number of different ranges, as: 600, 200, 1000, 250, 575, 625, 850, 975, 1125, 1275; set battle sight (see that the slide is moved to the bottom leaf); give several settings for upper open sight and triangle open sight, have wind-gauge set at zero; 1 right; 2 left; 1½ right; ¾ left; 2¼ right.

Now explain that being at 2¼ right you wish the wind-gauge moved toward the right the amount of ¾ of a point (ans. 3 right):

Move ½ left.....(ans. 2½ right)
Move ¾ left.....(ans. 1¼ right)
Move 1½ left.....(ans. ¼ left)
Move ½ left.....(ans. ¾ left)
Move ¾ left.....(ans. 1½ left)
Move 1½ right.....(ans. zero)

Have peep sight set at 550 yds., raise 50 yds. (ans. 600); raise 125 yds. (ans. 725); lower 50 yds. (ans. 675); raise 75 yds. (ans. 750); lower 150 yds. (ans. 600).

Indicate the place where you are standing as the firing line and some other object as the target, then indicate a direction from which the wind is supposed to come; the wind-gauge being at zero require the men to put on 1½ points for the indicated wind; see that they set it on the correct side. Have sight set at zero again, indicate several other directions of wind and each time see that men put the windage given on the correct side.

Use a target or something to represent a target with bull's-eye, starting with the wind-gauge at zero, indicate a point to the right of the bull's-eye, have men correct one point for it (ans. 1 left), being at one left, indicate a point to the right of the bull's-eye and call for a correction of ¾ for it (ans. 1¾ left), indicate a point to the left, require correction of 1½ points (ans. ¼ left), indicate a point to the left of the bull's-eye, require a correction of ¾ (ans. ½ right), indicate a point to the right, require a correction of one point (ans. ½ left), indicate a point to the right, require correction of ½ point (ans. zero).

Starting with the sights at 600, indicate a point above the bull's-eye, change 50 yds. (ans. 550); indicate a point below the bull's-eye, change 75 yds. (ans. 625).

Continue exercise by indicating points requiring correction in both elevation and windage and have correction applied each time to the last sight settings.

If you have used an actual sized target for your examples you will have incidentally conveyed some idea of the value of changes on the target.

(2) The Sighting Drills (Part I, pages 19-22).

Instructors will find the sighting drill methods on pages 23 to 35, Provisional Small Arms Manual, U. S. Army, 1909, to be tedious. It is sufficient to explain and demonstrate the sight, peep and open, and then cause the man to take the rifle, rest it on something, and show you that he understands it. A box with a barracks pillow on it makes an excellent rest for the rifle. This instruction has for its object only to teach how to sight, and to continue the exercises

by making the triangle of sights, etc., is a strain on the eye and a waste of time and effort. Avoid any reference to the fine sight and full sight in instructing men. They only confuse the men and give them wrong ideas. There is only one open sight, that is the sight known as the half sight. The other sights are improper, and even the use of the word "half-sight" should be abandoned; speak of it as the open sight.

Ask a few questions like the following to assure yourself that the man knows what has been explained and to impress it on his mind:

In using the peep sight do you aim at middle or bottom of bull's-eye? Do you aim so that the bull's-eye is in the center of the peep? What then is held in the center of the peep?

With the battle sight do you always aim directly at the object you wish to hit? Where do you generally aim, above it or below it? How do you find out where to aim with the battle sight? Answer: By firing each rifle several shots at each range until you find how far below the object you must aim. This is called "Sighting in."

Name several things used for blackening the sight.

(3) Position and Aiming Drills (Part I, pages 23-37).

Instead of using the methods of the position and aiming drill, pages 26 to 48, Provisional Small Arms Manual, 1909, more satisfactory results can be more quickly obtained by taking them individually and putting them into each position. They will resist it at first. Firm persistence is required, especially for the prone position. Men should be taught these positions and practiced exten-

sively in them before they come to the range. This instruction unlike the sighting drill should be practiced frequently so that men will be habituated to the positions. There is no better way than simply snapping to simulate range practice, squeezing the trigger carefully, and calling the shot each time. Careless snapping has no value other than a muscular exercise. There cannot be too much snapping even for the most expert rifleman. Snapping carefully is even better practice, so far as holding is concerned, than actual firing, because any dérangement of the aim is more easily noticed after the trigger has been squeezed if the rifle has not been loaded. Each barracks should have a snapping range of a distance of as near 200 yards as possible with a bull's-eye target (target A), and a skirmish and rapid fire target (target D), permanently painted on a board, targets actual size, and the board permanently fixed somewhere on the grounds. These targets could profitably contain other information, for the instruction of men. Snapping could then be done at 200 yards in all positions, and both slow and rapid fire and even the skirmish run could be simulated; the skirmish by advancing 50 yards, and then returning at double time, the incidents of the skirmish being explained at the time. The details of the skirmish are confusing to beginners, and they can be learned very easily thus on a 200 yard snapping range, or even on a shorter one. The skirmish seems to be the stumbling block for men on the range. The following plan has been used at the Marine Corps Rifle Range, at Winthrop, Md., and has produced good results: For the first instruction run, the men start at 200 yards, one man on a target

and fire the course slow fire fashion, the target being lowered after each shot and spotted and disked. For the second run in instruction practice begin at 600 yards; the double time and time limit are omitted, the targets being pulled, after all have finished, and at signal from the firing line, otherwise it is the same as a regular run. The elimination of the double time makes it easy to explain the incidents of the skirmish because when the men are double timed they find it difficult to pay attention to the instructor. In this way the skirmish is taught progressively and men realize that it is not impossible to make a good run and they are not discouraged when they make their record runs. It is always a good plan to let the skirmishers enter the butts, and see their hits on the targets. They are interested in it, and if this is done each skirmish run ought to be an improvement over the former run. They can then record at the target their hits in the score book. The score book is of such size that it can easily be carried in the pocket.

Ask these questions:

What is the proper length of the sling?

Where is the thumb of the right hand held in aiming? Why?

In the prone position what about the fingers of the left hand? Position of legs and heels? Cheek or jaw? When aiming where must the left elbow be? Moving the right elbow outward has what effect on the muzzle? Should the butt of the rifle be removed from the shoulder to reload in skirmish or rapid fire?

What about the muscles of the legs in the sitting position?

What is the position of the elbows in the sitting position?

What is the position of the left elbow in the kneeling position?

What effect does canting the rifle have on the bullet?
How should the trigger be let off?
What is meant by "Calling the Shot"?
What is the object in requiring men to call the shot?

(4) Parts of the Rifle (Part I, page 3).

It is a fact that sometimes men are found who do not know what the muzzle of the rifle is. Much of the talk about rifles is wasted upon a man if he does not understand the meaning of the words you use.

The subject can be speedily and thoroughly handled by: (1) Pointing out and explaining each part and its use, removing, dismounting and re-assembling the bolt and removing floor plate, etc. (2) Cause the men to point out the parts as you name them. (3) Cause the men to name the parts as you point to them. (4) Cause them to remove, dismount and re-assemble bolt, remove floor plate, etc.

(5) The Care and Cleaning of the Rifle (Part I, pages 4-6).

On well conducted ranges there should be a man stationed at the cleaning rack to supervise cleaning, supply material, etc.

What is not inspected is neglected and the system should provide for inspection before the rifle is laid aside for the day, and for daily inspection for several days after firing is completed, because the bore continues to "sweat" for several days after being fired.

It is not necessary to clean between strings during the day. Cleaning after the day's shooting is over is sufficient.

If properly taken care of, the shooting qualities of a rifle improves the more the rifle is used up to several thousand rounds.

When the rifle is first put into a man's hands it should be impressed upon him that the muzzle is the most important and delicate part, and under no circumstances must he ever clean from the muzzle end. If he should injure any other part of the rifle, new spare parts can be used, but to injure the muzzle absolutely destroys the accuracy of the rifle.

(6) The Course to Be Fired (Part I, pages 7, 8).

Familiarity with the work to be done brings interest into it.

Ask these questions: What army course do marines fire? Who shoots the sharpshooter's course? The expert's test? How often do marines fire these courses for record? With what course does a qualified man re-enlisting from Marine Corps or Army begin his target practice? What course is fired for prize competitions? How many kinds of prize competitions are there? Describe individual competition. Post competition. Inter-post competitions. On what courses do men draw extra pay? How much? How long?

Army Marksmen's Course. How many kinds of fire?

Slow Fire. What ranges? Position at each range? Kinds of sight used? (Men should be required to use the peep sight for slow fire and whenever the battle sight is not required.) How many shots at each range? What targets used at each range?

Rapid Fire. What ranges? Number of shots? What time limit? What targets used? What hits count at rapid fire? Position at each range? When is bayonet used? Kind of sight required?

Skirmish. How many runs? How many shots on each run? Position used at each range? (Ans. prone.) What ranges? Number of shots at each range? Time limit at each range? How long is the target down between ranges? What target is used? What hits count in skirmish? What sight is used at 600? (Ans. peep.) At the other skirmish ranges?

How many shots in an entire marksman's course? What is the highest possible score? Score necessary to qualify as marksman? What advantage is it to have 25 extra points? Is the first time your record firing?

Sharpshooter's Course. Ask similar questions as under marksman's course, leaving out skirmish.

Expert Rifleman's Test. What ranges? Kinds of firing at each range? Position at each range? Number of shots at each range? Time limit at each range? Kind of target at each range? Describe and tell how to rig up and operate moving targets. Bobbing targets. Falling targets. Target used at 600 yards. What about the wind-gauge at 200 and 300 yards? Is this true at the other ranges? What score is necessary to be able to qualify.

(7) Names and Dimensions of Targets (Part I, pages 10-12).

What is the height of all rectangular targets?

Width of target A? B? C? D?

Diameter of bull's-eye target A? B? C?

Width of average space between rings of all slow-fire targets?

How wide are the outside wings of the C target?

What are the two short ranges? Mid-ranges? Long ranges?

What target is used for slow-fire short ranges? Mid-ranges? Long Ranges? Rapid-fire? Skirmish?

What hits count in rapid-fire? Skirmish?
Describe collective fire target.

(8) O'Clock of Hits and Winds (Part I, pages 14, 15).

The best way to teach o'clock of hits is to use something representing a target and to mark different locations representing all the different o'clocks, and expressions and require the men to designate them: Drill men a little in o'clock of winds by indicating some distant object as representing the target and indicating different directions for the wind.

(9) Marking and Scoring (Part I, pages 16-18).

Ask these questions:

What color of disk represents a five? Four? Three? Two? How is a miss signalled? What value is given to a shot hole just touching the outside of the bull's-eye or any ring or edge of a silhouette? In skirmish how can the firer tell when he reaches the target at what range each hit was made? How are the hits at 350 yards marked? In rapid-fire which hits are disked first? What precautions must be taken before men in the butts can safely expose themselves? In scoring how does the scorer announce the value of hits? What score is recorded when a man makes a hit on the wrong target? When a buzzer is provided for each target what care must the scorer take? Answer: He should not press the buzzer until the marker has had time to pull the target without the buzzer being used. At long range the target is sometimes pulled before the bullet has time to reach it.

Note.—Single targets, that is only one target on each carrier,

are much preferable in every respect to double targets. If a weight is necessary to counterbalance the carrier and nothing else is available the other target can be placed in the carrier faced to the rear and serve as a counterbalance.

Single targets are faster than double targets even when men are shooting in pairs because a man gets his spotter at once and no time will be lost in changing sights. They are simpler and render messages from the firing line to butts less confusing. They are easier on the markers.

(10) The Zero of the Rifle (Part I, page 38).

When there is no wind can the wind-gauge of all rifles be set at zero for accurate shooting? Suppose the conditions require no windage for a rifle whose zero is zero—and you find that you have to use ½ point right windage, what would be the zero of that rifle? With a rifle whose zero is ½ right how would you set the wind-gauge when other conditions called for ½ point right? (Ans. 1 point right.) For ¾ left? (Ans. ¼ left.) For ¼ left? (Ans. ¼ right.) Suppose your coach told you that conditions called for ¼ point left, but you found that with your rifle you had to use ¾ left, what would be the zero of your rifle? (Ans. ½ left.) Suppose conditions called for ¼ right and you had to use ¼ left, what would be the zero of your rifle? (Ans. ½ left.) Will failure to know the zero of the rifle spoil a slow-fire score when conditions are steady? (Ans. No.) Why? (Ans. Because the firer can correct the windage after he hits the target with the sighting shots.) Are windage and elevation usually responsible for poor scores at off-hand (standing) shooting? (Ans. No. Not holding steady is the trouble here.) What is the

best range to find out the zero of the rifle? What is the zero of most rifles? (Note.—It is not a good plan to teach beginners very many things that are not simple. It is failure to do the simple things which produces poor results with beginners. The zero of the rifle is mentioned in Part I only to prevent beginners whose rifles had a considerable zero from losing faith in his instruction. Coaches should help each individual to find the zero of his rifle and avoid introducing, at first, too many things to bewilder the inexperienced man. The necessary details thoroughly taught are the real important things in the training of the beginner.)

(11) Meaning of the Elevation and Windage Marks on the Diagram Targets and How to Keep the Score Book (Part I, pages 39-43).

When you're firing at 600 yards, for example, is the sight always set at 600? Look at a 600-yard diagram, target page, and tell how much change of elevation is necessary to bring a bullet from the top or bottom of the target to the middle of the target. Do same for 500, 800 and 1000.

How much change in wind-gauge is necessary to bring a bullet from the edge to the middle of target at 200 yards? 300 yards? 500 yards? 600 yards? (Ask a number of questions such as these.) Firing at 600 yards. Your sight is set at 575 yards. You are making threes at 12 o'clock. How should you change your elevation? Your wind-gauge is at zero and you are making fours close in 3 o'clock. How should you change your wind-gauge? Give several such examples, also examples involving changes in both elevation and windage using diagram targets for different

ranges. Men should now be given an exercise in keeping the score book. Give them the data orally and require them to fill it in. The data given should be consistent, and when you designate the location of each shot let the men decide and announce to you what changes in elevation and windage they are going to record. Their work should be carefully inspected and corrected for them and the exercise repeated at other times for those whose work is not approved sufficiently to "qualify" them.

While firing on the range men should always be required to keep the score book accurately because this cultivates the habit of taking pains and the power of observation, two things that are absolutely necessary to a skilful rifleman.

Men will neglect to keep the score book unless it is inspected after each string.

(12) How to Behave on the Range.

(Important Range Rules, Part I, pages 36, 37.)

Beginners will neglect to blacken the sights unless they are inspected. Inspect rifles and cause men to show their score books and pencils, and see that right shoulders and elbows are properly padded.

On each range announce what change a quarter of a point of windage, and 25 yards of elevation will give on a target. Then announce what windage the conditions call for. Encourage men waiting to fire to get abreast of the firers and practice snapping—(except in matches).

When there are large numbers of inexperienced men on ranges it is a safe plan to require the bolt to be kept open, but when

there are experienced coaches and the men are well in hand this is objectionable because dust and grit enters the mechanism and the chamber. "Calling the Shot" is important. Men will neglect to do it unless persistently reminded of it. Let the scorer remind them if there is not a coach at each firing point.

Experience has proven that the best results are obtained with men shooting singly and not in pairs. This method is quite as fast, less confusion arises, men are better coached, it is less tiresome and more pleasant for the firer.

A 6 ft. x 6 ft. black board with a white bull's-eye and the rings like the B target is extremely useful in giving the course of instruction outlined in this book.

GALLERY PRACTICE.

Gallery practice is a continuation of the preliminary training of holding and aiming. It is the stage in the progressive course between the position drills and the range practice with the service cartridge.

The interest of men under instruction soon diminishes with no other stimulant than simulated fire or snapping. The possibility of recording results of instruction by the hit carries the interest further. It incites competition and exposes inattention. It gives the instructor further opportunity to observe the individual and to correct his faults in detail. It records certain faults such an an incorrect understanding of the line of sight, canting the rifle, faulty trigger squeeze, and should serve as a final test of preparation for the range, for certainly men who are not able to hit under the easy conditions of the gallery will not do so on the range. Men who have not yet learned the elementary principles necessary to qualify in the gallery will not improve during range practice. Their advancement is liable to be delayed because not knowing how to hold they may become gun shy and discouraged in their work by their failure to make good hits.

Careless gallery practice does no good. In fact it may do injury for with the lack of recoil in the reduced charges men may acquire habits of holding which are all right for the reduced charge, but which will be faulty and make them gun shy when they advance to the service load. All gallery practice should be under a competent instructor at each target who must be sure that careless habits of holding will not be formed.

Gallery practice having for its object only a means of teaching the elementary principles, nothing is gained by requiring it to be done at more than one distance. Fifty feet is the maximum distance at which the hit is plainly visible to the firer. Practice at longer distances intro-

duces inconveniences and delays without offering any benefit in return. All the different positions and holds can be practiced from one point quite as well as from several. The sights of each rifle should be correctly set and tested by the instructor so that the hit will be in the bull's eye.

In the Marine Corps, gallery practice is not taken into account in deciding range qualification. It is regarded as a preliminary instruction, and the course and the methods to be used are left to the discretion of the commanding officer or officer charged with the preparation of the men for the range. The course should include firing in all positions at fifty feet, and the necessary score for gallery qualification should depend on the size of the target, and men who have never qualified as marksmen should never be sent to a range for practice until they have exhibited the thoroughness of their preliminary training by qualifying in the gallery.

Gallery practice in turn becomes tedious, and after men have qualified in the gallery, and men who are marksmen, may well be excused from practice unless the interest is sustained by competitions or by other means.

A gallery strictly speaking is an indoor short range. The expression has come to include outdoor short ranges. In fact in good weather an outdoor gallery is quite as good as an indoor gallery. It is desirable but not necessary to have it in the lee of a building or fence, and to have it in a shady locality, such as on the north side of a building. The construction of a gallery it is a very simple matter. It simply means putting up an iron or paper target in a safe place. If a bullet stop is desirable a suitable one may be made of packing boxes filled with earth. Iron targets are furnished by the Quartermaster. If none are on hand, paper targets may be used, and if regular targets are not available, they may be made from plain paper.

REMOVAL OF METAL FOULING.

Formula for Ammonia "Dope":

Ammonia persulphate	1 ounce
Ammonia carbonate	200 grains (about ½ ounce)
Water	4 ounces
Aqua Ammonia (Commercial 28%)	6 ounces

Thoroughly pulverize the ammonia carbonate crystals. (A wedge wood mortar and pestle is usually used for this.) Then place the carbonate and persulphate in a 12-ounce glass bottle with rubber stopper (ordinary magnesia bottles obtainable at drug stores) and add 4 ounces of water (the bottle is now a little over 1/3 full). Shake until all crystals are dissolved. The persulphate dissolves readily, the carbonate slowly. Then add 6 ounces of aqua ammonia, almost filling the bottle, and keep bottle tightly corked. This will "dope" about seven rifles.

A rounded, not heaped, table spoon or haversack spoon of the crystals is about an ounce.

The carbonate and persulphate act on the cupro-nickel fouling and dissolve it, coloring the "dope" deep blue. They will also attack the steel of the bore unless ammonia gas in the aqua ammonia is present.

The ammonia gas rapidly escapes unless the bottle is kept tightly corked. The "dope" becomes stale and loses the ammonia gas even when the bottle is kept over night; it should not be used after it has been mixed several days.

It should not be placed in a hot or warm barrel because the heat drives off the ammonia gas. When not convenient to wait for the barrel to cool off, it can be cooled by pumping cold water back and forth through the bore by means of a cleaning rod and rag.

The dope should not be allowed to remain in the bore over ten minutes, because the ammonia gas rapidly escapes. Five minutes is long enough, and then if fouling has not disappeared use fresh "dope."

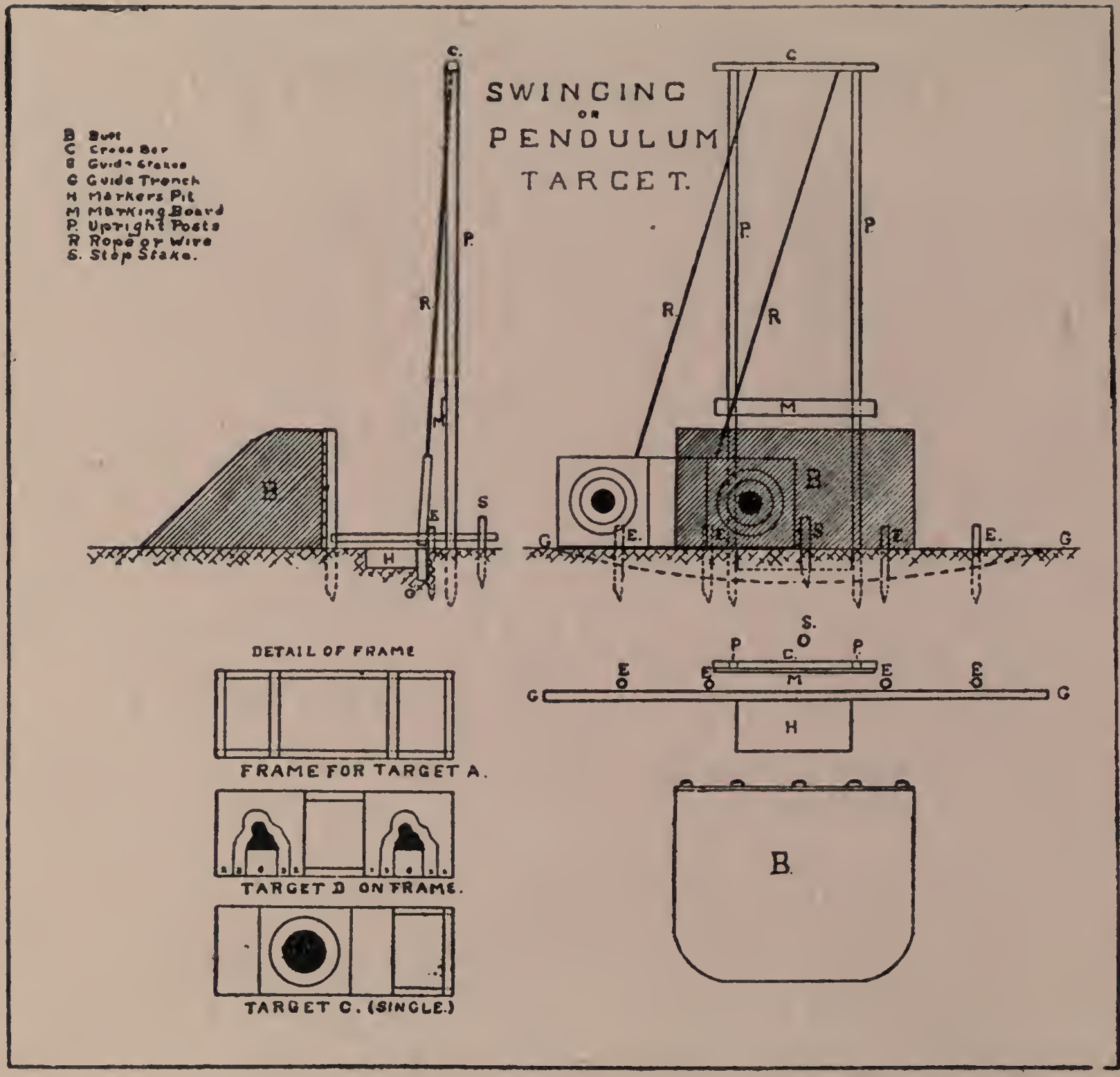
Remember that if the ammonia gas is not present in the "dope" by reason of "dope" being stale, or put in a warm barrel or allowed to remain too long in barrel, the barrel will be instantly ruined. The steel will be vigorously attacked and eaten out by the carbonate and persulphate.

The "dope" should be made and its use supervised by a careful, experienced man. Bottles of stale "dope" must be emptied and not left carelessly around. It should not be mixed in larger quantities than the 12-ounce bottles.

To put it in bore, place a No. 2 cork in the chamber stopping up the breech end of the barrel, and place a piece of 3/8-inch rubber tube about 2 inches long over the muzzle. Then pour in "dope," being careful not to let it overflow. After pouring "dope" from rifle, be careful to thoroughly clean and dry the bore so that no carbonate or persulphate will adhere to the steel. Then if no more firing is to be done with the rifle during the day, oil the bore.

If the "dope" is spilled on the metal parts of the rifle, remove it immediately and oil, otherwise it will quickly cause rust.

"Doping" a rifle for metal fouling also removes the sticky acid fouling.


B Butt
C Cross Bar
E Guide Stakes
G Guide Trench
H Markers Pit
M Marking Board
P. Upright Posts
R Rope or wire
S. Stop Stake.
SWINGING
OR
PENDULUM
TARGET.
C.
P.
R.
B
S
E.
H
G
M
DETAIL OF FRAME
FRAME FOR TARGET A.
TARGET B ON FRAME.
TARGET C. (SINGLE.)
B.

THE SWINGING (OR PENDULUM) TARGET.

On temporary ranges or when there is no time or means to instal regular target carriers, the swinging or pendulum target can be quickly prepared from the materials usually at hand and with unskilled labor. Hammer, saw and spades are all the tools required, and nails, rope (or wire), and some timber from woods or boards such as are usually found nearby in any locality are all the materials required. A party of men can put up the target described in a few hours. It is easy of operation, fast and generally satisfactory for temporary use. Moreover, it never gets out of repair. The ropes (or wire) on which the target frame is suspended are sometimes cut by a bullet, but if double ropes (or wires), each pair a few inches apart, are used where single ropes are shown in the diagram, this cutting of one of them will not interfere with the operation of the target. In practice a rope is rarely cut, and little inconvenience is experienced from this cause.

The upright posts (P) are either of round timber cut from the woods, or they may be 4 in. x 4 in. scantling. They should be at least 25 feet above the ground. The higher they are the more easily the target is operated. Before these are raised cleats should be nailed on the rear side of one of them to facilitate climbing when it is necessary to fix the ropes. These posts may be guyed with wire to make them steadier, but if planted deep enough in the ground, it is not necessary to guy them. These posts are planted about 8 feet apart.

The cross bar (C) and the marking board (M) should be fastened to the posts before they are raised. The cross bar may also

be of round timber. The marking board is an unpainted board from 6 feet to 12 inches wide.

The butt should be about 16 feet wide and 8 feet high. It is made of earth revetted with either poles or brush or with boards preferably 2 inches thick, as shown in the diagram. The posts which support the board revettment may be round timber and should be deeply planted in the ground. At the top of the butt the earth should be no less than 4 feet thick. The sides of the butt should be revetted. Grain bags filled with earth make a good revettment for the sides.

The markers' pit (H) should be about 18 inches deep so that the markers may use the surrounding ground as a seat. In the diagram the markers' pit is 8 feet long and 4 feet wide; this gives a margin of safety behind the butt of 4 feet on each side. Markers, although allowed to sit on the edge of the pit, should be cautioned not to step outside of it during range firing.

The guide trench (G) is a narrow trench which guides the target frame as it swings from one side to the other, and keeps the ropes clear of the upright posts. The depth of the trench is determined by experiment after the target frame is attached to the ropes. Guide stakes (E) may be used in the rear in addition to the guide trench.

To determine proper length of rope place the target in the position in which it will be fired upon, then fasten the ropes to the frame.

The target is pushed out and held in place by a man standing at (H), in the middle of markers' pit. He uses a stick and holds

one end of it while the other end is held in place by a stake (S) driven in the ground. When he releases the target it swings with slight assistance to the other side of the butt, and the target which appears on that side is then in position. The *value* of the hit on the target now behind the butt is disked by a second man who uses a staff. He places the proper disk on the marking board and thus does not interfere with the firer about to fire on the target in position. The *location* of the hits are shown by the use of spotters placed in the shot holes by a third man who also pastes the holes as soon as he removes the spotter. One man can perform the necessary service in the pit, but as two pair of firers can use the target at the same time, three men can give service as fast as four firers can shoot.

The target frames each contain two targets, all the frames are 16 feet long except the frame for the long range target which, if double, must be at least 24 feet long. It is better, however, to use a frame 16 feet long for the long range target, using only one target on the frame, and always pushing it out on the same side. The 24-foot frame is heavy, unwieldy and difficult to make strong. The frames are made of rough boards 3 inches or more wide. The frame should be a few inches wider than 6 feet so that when targets are pasted on there will be a part of the board frame below the target, and in the guide trench to prevent the wind from disturbing the target.

Separate frames should be provided for the A, B, C, and D targets. When not in use these frames are piled back of the butt, and when necessary to change kind of target, change entire frame.

Numerous shot holes do not make them unserviceable. On a temporary Marine Corps rifle range at Leilehua, near Honolulu, one set of frames lasted an entire season of three months.

EXTRACT FROM ORDERS.

Special Order No. 109.

Navy Department, Washington, D. C., August 22, 1911.

20. The following outfit is fixed as the authorized allowance of equipment for range practice, and for use of the rifle team, for each marine detachment serving aboard vessels of the Navy, and for each company of marines serving ashore. At posts where marines are not regularly organized into companies, and where the average number of men exceeds 100, two outfits will be allowed. Requisitions for these outfits may be made on the respective depot quartermasters in charge of the Marine Corps depots of supplies.

Articles.

4 barrack cleaning rods.
1 field glasses, pair.
4 gun rests.
4 micrometers, or verniers, for adjusting sights.
1 micrometer calipers.
1 Modern Rifle Shooting.
4 Provisional Small Arms Firing Manuals, United States Army, 1909.
4 Suggestions to Military Riflemen (Whelen).
2 telescopes.

2 telescope rests.
00 buckshot (1 pound annually for each 50 men).
Canton flannel (1 yard per man annually).
Score books (1 for each man annually), United States Marine Corps.

EXTRACTS FROM GENERAL ORDER, NO. 112, NAVY DEPARTMENT, WASHINGTON, D. C., APRIL 26, 1911.

A thorough knowledge of the complete general order is indispensable to officers and to men concerned with the preparation of muster rolls, pay rolls, and target reports.

Only such parts as are of interest to riflemen are quoted below.

General Order
No. 112

Navy Department,
Washington, D. C., April 26, 1911.

1. * * * When firing for qualification under Army firing regulations * * * the Provisional Small Arms Firing Manual, United States Army, 1909, shall govern.

3. "Prizes for excellency in gunnery exercise and target practice, both afloat and ashore, in all competitions occurring subsequently to June 30, 1906, shall be awarded and paid to enlisted men of the Marine Corps, in like manner, in the same amounts, and under the same conditions as to enlisted men of the Navy." (Executive order, Oct. 1, 1906.)

4. (a) Classification under Firing Regulations for Small Arms, United States Navy, does not entitle enlisted men of the Marine

Corps to the extra compensation provided for by law for expert riflemen, sharpshooters, and marksmen of the Army, and applicable to the Marine Corps by statute. To receive such extra compensation enlisted men of the Marine Corps must qualify under the firing regulations specified in the first paragraph, and in order to enable marines serving afloat to qualify under the said regulations they will, whenever practicable, be given opportunity to fire under said regulations, and when held such practice will be in addition to and separate and distinct from the practice of the crews of naval vessels.

9. (a) A marine is entitled to fire the regular record practice for classification under the Army firing regulations only once during each target or calendar year, and men who have qualified as marksmen are not again required to fire the marksman's course for classification during the succeeding years of their enlistment; likewise, men who have qualified as sharpshooters are not again required to fire the marksman's or sharpshooter's course for classification during current enlistment. Men who have qualified as expert riflemen are not again required to fire for classification during the current enlistment.

19. Prizes for excellency in target practice will be awarded and paid to enlisted men of the Marine Corps only when they have fired the Navy marksman's course. At all stations where there are available range facilities the enlisted men stationed thereat are, if practicable, required to fire the Navy marksman's course once per year, and are permitted to fire that course twice per year, and individual prizes may be awarded for both such practices. The

rules for awarding these prizes are prescribed in the Firing Regulations for Small Arms, contained in the Landing Force and Small Arms Instructions, United States Navy.*

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* EXTRACTS FROM THE LANDING FORCE AND SMALL ARMS INSTRUCTIONS, U. S. NAVY, 1911, pp. 350 and 351.

251. **Rules for awarding prizes.**—1. Commanding officers are authorized and directed to award prizes for small-arm marksmanship to enlisted men under the command as follows:

2. There shall be three classes of prizes, namely:

(a) First prizes of $10.00 each.
(b) Second prizes of $5.00 each.
(c) Third prizes of $2.00 each.

3. For every twenty-five enlisted men who complete the marksman's course (whether they succeed in classifying or not), the commanding officer will award one first prize, one second prize, and two third prizes; provided that the prizes shall be awarded to the enlisted men who have the highest final merit in rifle and pistol firing at the marksman's course.

252. **Men who complete** the required marksman's course on any practice will be counted in determining the prizes to be awarded; * * * men who have only partially completed the marksman's course will not be counted in determining the number of prizes to be awarded.

253. **In case the number of enlisted men** who complete the prescribed course of firing is not an exact multiple of 25, the multiple of 25 which is nearest to the number of men who completed the prescribed course of firing will decide the number of prizes to be awarded. Thus, if 112 men finished the prescribed course of range-firing for their respective classifications, 4 sets of prizes will be awarded, but if 113 men finished the course, 5 sets of prizes would be awarded, as 125 is the nearest multiple of 25. In no case, however, shall a first prize be awarded to any man unless he has duly qualified as marksman (80 per cent.) on the practice for which the prize is given (under the conditions specified in the "General Instructions for Rifle and Pistol Firing"); or a second prize to any man unless

The number of second or third prizes awarded will not be increased by reason of men failing to qualify sufficiently high to be awarded the authorized number of first or second prizes.

Insignia will not be awarded to officers or enlisted men serving at shore stations who qualify in the Navy courses.

20. Commanding officers (those rendering muster rolls) will determine the amount of instruction practice preceding record practice for Navy marksman's course, and may dispense with instruction practice or vary the amount thereof in individual cases.

21. At stations where there are companies which prepare separate muster rolls and pay rolls the enlisted men of each organization will compete with each other and not with men of other organizations.

27. Gallery practice is a preliminary instruction. It is not taken into account in deciding qualification, and no entry of gallery scores or gallery qualifications will be made in the descriptive book. No report of gallery firing is required.

29. Bars will be awarded to enlisted men upon re-qualification in each enlistment; to officers upon three annual qualifications, not necessarily consecutive.

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duly qualified as either a marksman or a first-class man, or a third prize to any but a marksman, first-class man, or a second-class man.

255. **When prizes are to be awarded.**—(1) All vessels are **required** by these instructions to carry out small-arm target practice once per year, and they are **permitted** to carry out during the year another practice for which prizes are to be awarded. Ammunition being unlimited in allowance, other firing may of course be carried out at any time, but only on two practices in any one year can prizes be issued. Men will, however, be permitted to qualify on any complete record firing during the year * * *.

30. In addition to the prizes awarded from public funds, there may be appropriated from the post exchange, post or company fund in the regular manner other prizes for marksmanship competitions, either rifle, revolver, gallery, sub-target machine gun, field pieces, automatic guns, or markmanship contests of any species. Such competitions or matches may be specially arranged at posts or held in conjunction with post, interpost, division, or Marine Corps competitions. Officers are not debarred from these competitions and may be granted prizes therein. In like manner matches may be arranged and prizes paid from funds received by donation, voluntary entrance fees, or from any proper source.

POST COMPETITIONS.

32. (a) Post competitions, corresponding to the competitions between the various gun divisions or rifle teams of a ship, referred to in Landing Force and Small Arms Instructions, United States Navy,* will be held twice per year by marines stationed at posts whose garrisons are afforded practice.

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*EXTRACTS FROM THE LANDING FORCE AND SMALL ARMS INSTRUCTIONS, U. S. NAVY, 1911, pp. 351 and 352.

256. (1) Commanding officers will encourage and facilitate voluntary practice with the rifle and pistol and competition between the various gun-divisions or rifle-teams of the ship. Competition between the rifle-teams of different ships should also be encouraged, and the men forming such teams should be given opportunities to prepare for these match contests.

2. Prize money for gun-division, or ship-teams is authorized as follows: Each half-year commanding officers may allow for division competitions $2.00 for each man that actually fires on each competing division-team, the whole sum to go to the winning team * * *. This allowance will be made only once in a half-year for any one division. Division-teams will consist of eight men. In

(b) One team of 8 enlisted men will be allowed for each company, and if companies are not returned for on separate muster rolls, one team will be allowed for each 54 (fractions disregarded) enlisted men serving on the last day of the month preceding that in which the competition is held, provided that at each post at least two teams will be authorized to compete, regardless of the number of companies or the number of enlisted men serving thereat.

(d) The course of fire in post competitions for which prizes are awarded on the pay rolls will consist of the record practice, Navy marksman's course. Preliminary practice may be authorized, but the scores of preliminary practice will not be shown on the report of the competition.

(e) The total prize money will be awarded to the winning team, and each member of the winning team will be credited on the pay roll with a sum equivalent to $2 times the number of authorized teams competing.

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order to entitle teams to this award, the competition must include the entire course of record firing, both rifle and pistol, at the prescribed marksman's course.

3. In order to add to the interest in ships' competitions, and to make available a fund from which prizes may be awarded, whenever two or more ships are in company, commanders-in-chief, squadron commanders, or senior officers present are authorized to offer a sum not exceeding $5.00 for each man that actually fires on each competing ships' team, the whole sum to go to the winning team * * *. This allowance will, for any one ship, be made only once during any half-year * * *.

4. Ships' teams will consist of twelve men, and, as in division competitions, the entire prescribed record firing of the marksman's course must be completed. Any number of ships may enter a competition, not more than $5.00 per man being allowed for each * * *.

INTERPOST COMPETITIONS.

33. (a) In each target year there will be held interpost competitions corresponding to the competitions between the rifle teams of different ships referred to in Landing Force and Small Arms Instructions, United States Navy.

(b) Competing teams will consist of one team of 6 enlisted men, selected by the commanding officer of each post which is herein authorized to send the number of 6 enlisted competitors to the division competition. In the Philippine Islands the interpost teams will consist of 12 enlisted competitors.

(c) The course of firing in interpost competitions for which prizes are awarded on the pay rolls will consist of the record practice, Navy marksman's course.

(d) The total prize money will be awarded to the winning team, and each member of the winning team will be credited on the pay roll with a sum equivalent to $5 times the authorized number of teams competing.

(f) In the Philippines this competition will be between the regiments of the brigade, even though parts of the regiment are stationed at same posts.

(g) The various posts of the Marine Corps in the United States and the Territory of Hawaii will, for the purpose of this competition, be divided into groups by the major general commandant who will further designate the dates and places for the holding of these competitions.

34. There will be held annually—

Division rifle competitions, and

Marine Corps rifle competition,

corresponding to like competitions for the Army; i. e., departmental and Army.

DIVISION COMPETITIONS.

35. (a) For the purpose of this competition the following divisions are defined:

1. The North Atlantic Division, comprising all posts along the Atlantic coast and north of the Potomac River.

2. The Southern Division, comprising all posts along the Atlantic coast south of the Potomac River and those posts along the coast of the Gulf of Mexico.

3. The Pacific Division, comprising those posts on the Pacific coast and in the Territory of Hawaii.

4. The Philippines Division, comprising those posts in the Philippine Islands.

(b) Isolated stations such as Sitka, Guam, Panama, San Juan, Guantanamo, and other posts not in the Philippines Division and beyond the continental limits of the United States, are not included in these divisions.

(c) In all divisions, except the Philippines Division, the competitions will be held during the week beginning with the first Monday in June. In the Philippines Division, during the week beginning with the second Monday in March.

(d) North Atlantic, Southern, and Pacific Division competitions will be held at such place as the major general commandant may direct.

Philippines Division competition will be held at such place as the brigade commander may direct.

(g) Each post commanded by an officer situated in the several divisions will furnish six enlisted competitors, selected by the commanding officer, and as many officers as may be ordered by the major general commandant or, in the Philippines, by the brigade commander.

(h) As many other enlisted men who are regularly classified or entitled to classification as marksmen, sharpshooters, or expert riflemen as may be present on the range and officers who have ever qualified in any of the grades of or above marksman may be permitted to enter this competition.

(i) In the Philippines Division each regiment, instead of each post, will furnish 15 enlisted competitors, and in addition thereto as many marksmen, sharpshooters, and expert riflemen as may be present and desire to compete may be so permitted.

(j) Commanding officers of isolated stations beyond the continental limits of the United States, commanding officers of naval vessels, and commanding officers of stations, such as recruiting stations, may recommend to the major general commandant, or to the brigade commander in the Philippine Islands, individual officers or men as suitable candidates for the nearest competition.

(k) The division team will consist of the 12 enlisted men making the highest aggregate scores in the competition, and in each division the following medals will be awarded according to order of merit: One gold medal, three silver medals, and eight bronze medals.

(l) Any commissioned officer making a score equal to or

greater than that of any enlisted member of the team will receive a medal like that awarded to such member.

(m) Course of firing in division rifle competition will be record practice, marksman's course, under Army Firing Regulations, 1909.

(n) The division competition will be preceded by a like course of preliminary practice.

MARINE CORPS COMPETITION.

36. (a) The Marine Corps competition will be held at such place as the major general commandant may direct during the week beginning with the fourth Monday in June.

(c) The competitors in the competition will consist of enlisted men who composed the division teams for the year and of officers who at the competitions have earned authorized medals, together with all officers and enlisted men who hold regular qualifications as marksmen, or higher, who may be present and desire to compete.

(g) In order to encourage marksmen, sharpshooters, and expert riflemen who are not members of division teams to participate in the Marine Corps competition, the major general commandant will entertain, if properly forwarded and approved, applications for officers and enlisted men to attend the competition at their own expense, and enlisted men may include in their applications permission to report at other stations at the conclusion of the competition, or of the furloughs granted them for the purpose of attending the competition.

(h) The Marine Corps team will consist of the 12 enlisted men making the highest aggregate scores in the competition, and the following medals will be awarded according to the order of

merit: To the first 4 enlisted competitors, gold medals; to the remaining 8 members, silver medals.

(i) Any commissioned officer making a score equal to or greater than that of any enlisted member of the team will receive a medal like that awarded to such member.

(j) The course of firing in the Marine Corps competition will consist of the record practice marksman's course, Provisional Small Arms Firing Manual, United States Army, 1909. The competition will be preceded by a like course of preliminary practice.

DISTINGUISHED CLASSES OF MARKSMEN.

37. The provisions of paragraph 332, Provisional Small Arms Firing Manual, United States Army, 1909,* relative to distinguished classes of marksmen, will prevail in the Marine Corps. When men or officers are transferred to the class of "distinguished marksmen," the fact will be announced in Marine Corps orders, and although no longer eligible for a place on the division team of the arm in which they are distinguished, they may fire in those competitions and will be graded in order of merit as extra numbers among the competitors.

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* EXTRACTS FROM PROVISIONAL SMALL ARMS FIRING MANUAL, U. S. ARMY, 1909.

Distinguished Classes of Marksmen.

332. Requirements.—Whenever a marksman has won three authorized medals in department, departmental, division, and army rifle, or carbine competitions, * * * or as a member actually firing on a prize-winning team in the national team match, he will be announced in orders from the War Department as belonging to a distinguished class, no longer eligible to enter the department competitions * * *

COLLECTIVE FIRING.

38. The following system of collective fire is adopted for the Marine Corps:

(a) This fire will be held by squads of exactly eight men firing, commanded by an officer or enlisted man, or by groups of such squads firing simultaneously.

(b) The prescribed target is a group of three continuous "C" targets; thus, the target will be 6 feet in height and 36 feet in width. The bull's-eye of the center target of the group will be the objective. When groups of squads fire simultaneously, separate groups of targets will be provided for each squad.

(c) The squads will be deployed for collective fire, and the firing and exercise will be conducted in accordance with the principles of drill regulations. When several squads fire simultaneously, the skirmish line will be continuous, with no intervals between squads. An effort should be made to include each enlisted man in at least one collective fire squad annually, and in order to carry out the provisions defined below men may be required to so fire more than once per year.

(d) In order that relative comparisons of the efficacy of collective fire of the men of the various grades of qualification may be obtained, an effort will be made to compose squads entirely of men who have qualified as expert riflemen, sharpshooters, or marksmen (qualified men), of men who have fired the course and who have failed to so qualify (unqualified men), and of men untrained in marksmanship (recruits). When it is not practicable to so compose squads, the squads not so composed will be designated as **mixed.**

(f) The prescribed course for collective fire is as follows: Each man of the firing party will, in both volley fire and fire at will, fire 5 rounds at each 400 yards, 600 yards, 800 yards, and 1,000 yards. All fire will be from the prone position. The fire may be begun at either end of the above-mentioned sequence of ranges. For instance, the volley firing may begin at 1,000 yards and advance to the completion at 400 yards, then fire at will may begin at 400 yards, the party then retiring to the other ranges.

(h) In case a range of 1,000 yards is not available, the firing will be held at as many of the ranges (400, 600, and 800 yards) as is possible.

(i) Each time a squad or group of squads is practiced in collective fire the volley fire will be completed at all ranges before the fire at will is begun, and on each group the number of shots on the bull's-eye of the center target, the number of shots on the entire center target, and the number of shots on the entire group will be recorded after the fire at each range.

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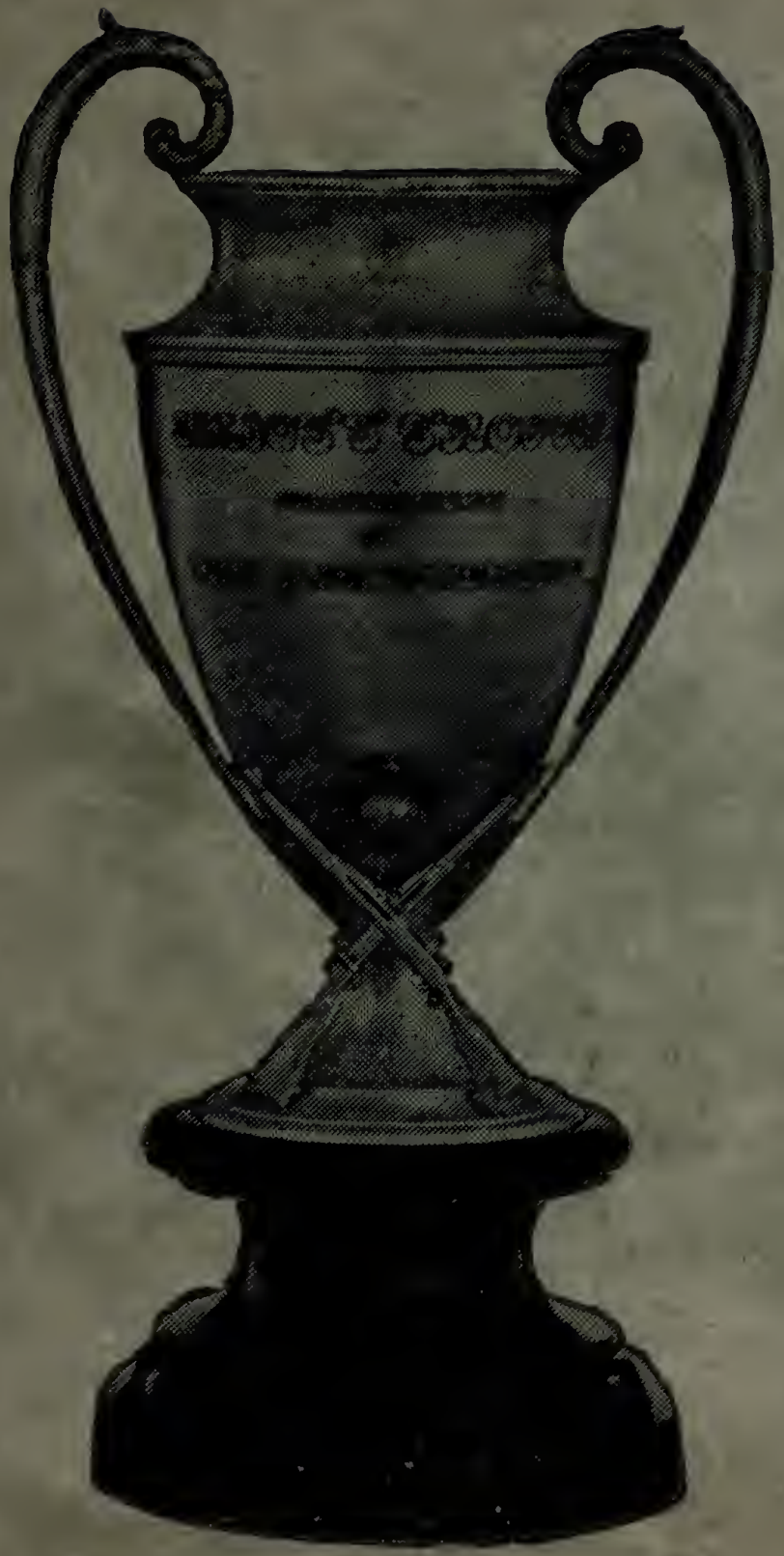

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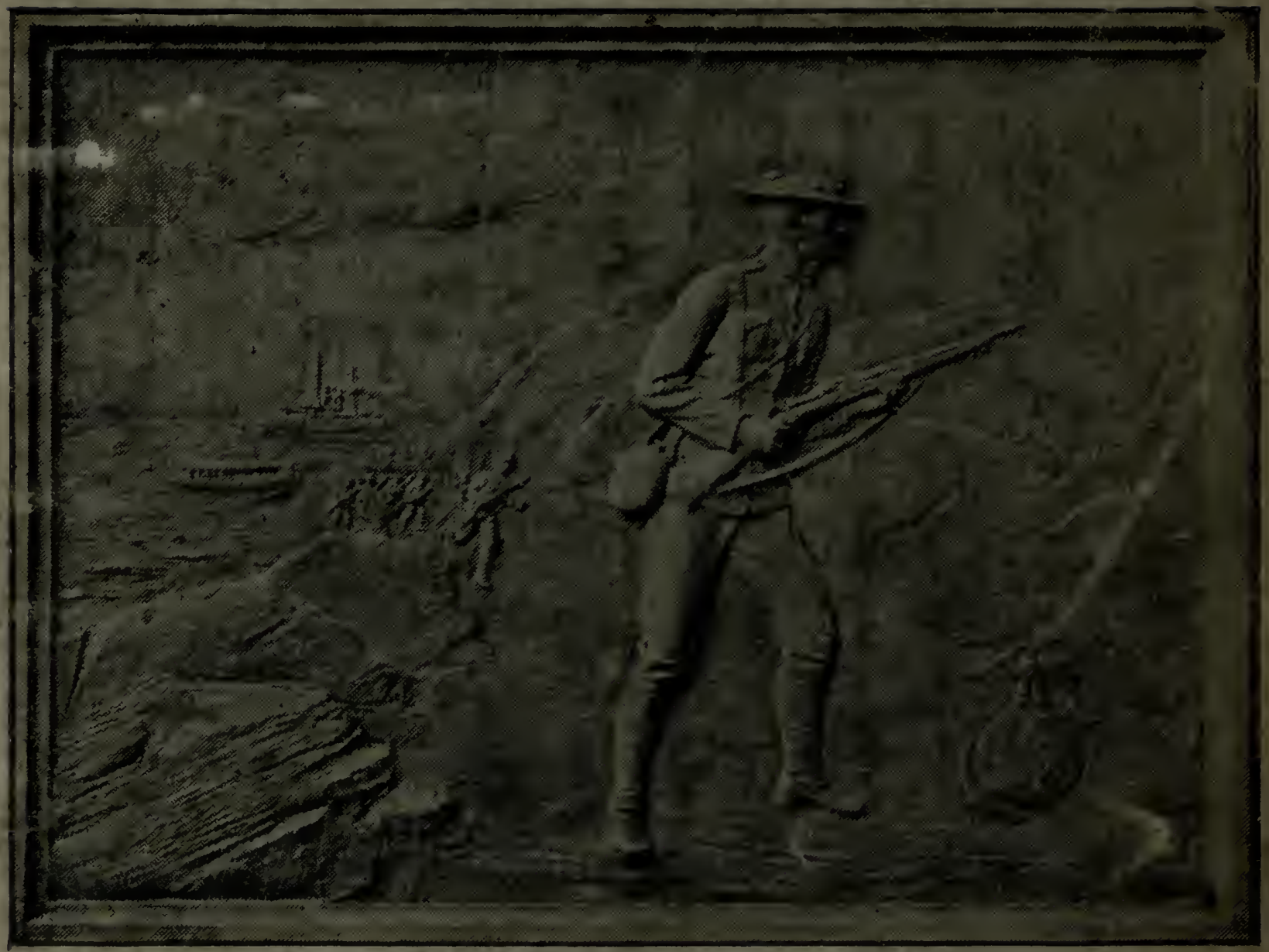

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